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ABSTRACT

This monograph, intended to aid business education teachers, examines various aspects of the legislation concerning the education of handicapped students, and presents methods of teaching handicapped students in regular business education classrooms. The book contains six chapters, a bibliography, and appendixes. Chapters 1-2 summarize the history and philosophical foundations of educating the handicapped in regular classrooms, along with current concerns and issues. Topics covered include Public Law 94-142; Individualized Educational Programs (IEPs); Public Law 94-482 and Public Law 93-112, which pertain to vocational training and non-discrimination in programs that receive federal funds; social and staffing issues; and awareness of materials and methods. Chapter three describes various handicapping conditions--learning disabilities, behavioral disabilities, hearing impairment, visual impairment, orthopedic handicaps, and illness--and suggests strategies for teaching business subjects to these students. In chapter four, adaptations in the business education curriculum for handicapped students are discussed, including adaptations that can be made in secretarial/word processing programs, stenographic/secretarial programs, typing instruction, and special curriculum or skill adaptations for hearing impaired, blind, and mild mentally handicapped students. Chapter five points out the changes that need to be made in teacher education in order to prepare business teachers to deal with handicapped students; and chapter six suggests challenges of this decade, including the career opportunities that may open up for handicapped students. Appendixes contain a list of special teaching materials on mainstreaming, source materials for teaching blind and handicapped students, a competency profile for vocational teachers instructing sensory and physically impaired students, and a sample IEP. (KC)

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MAINSTREAMING IN BUSINESS EDUCATION

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Donald H. Fox, Editor

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PREFACE

Business educators during the past decade witnessed the culmination of endeavors to obtain the legal right to free, appropriate education in the least restrictive environment for *all* students. As a result of several legislative acts, particularly Public Law 94-142, dramatic changes are taking place in some classrooms at levels ranging from preschool through postsecondary institutions.

The purpose of this monograph is to examine various aspects of the legislation concerning the education of handicapped students and to present methods of teaching handicapped students in regular business education classrooms.

For many years, business education teachers have accepted the responsibility for providing personal and vocational skills to handicapped students. However, in many of these instances, little in the way of special materials, equipment, or methods was available for classroom use. In recent years, business education curriculum committees have adapted materials for special needs students. Such a project was developed by the Department of Adult, Vocational and Technical Education/Research and Development of the Illinois State Board of Education. The authors of this monograph appreciate the cooperation of Sharon Marana and Dr. Wilma Jean Alexander for permitting the adaptation of materials from the Illinois curriculum guide, *Business Education into the Eighties*.

We sincerely wish that MAINSTREAMING BUSINESS EDUCATION will provide new and innovative ways to teach the handicapped student.

M. M. and H. C.

CHAPTER 1. PHILOSOPHICAL FOUNDATIONS

Equal educational opportunity for all students is a recent concept in both theory and practice. Historically, even the concept of free educational opportunity for the so-called normal student is relatively new. The first public secondary schools in the United States were established less than two hundred years ago.

The Outcasts

In retrospect, one needs to consider the attitudes of society toward handicapped individuals in order to understand the evolution of the present philosophical concept of equal educational opportunity for *all* individuals. Literature contains stories of maltreatment of the handicapped in the pre-Christian days. Christianity brought about a more sympathetic attitude, yet the literature continued to describe the court jester, the "attic" child, and the circus freak. Myths about those with various handicaps evolved, especially in relation to the visually impaired. One can still encounter the handicapped beggar, read of the child abused because of its handicap, or learn of the handicapped adult who cannot obtain suitable employment. However, these incidents seemingly occur now with far less regularity because of provisions for education and rehabilitation of handicapped persons.

The Special Schools

In the eighteenth century, two gentlemen started the movement to provide systematic education for the handicapped. Abbe' de l'Epe'e opened the first school for the deaf in Paris (1760). Valentin Hauy founded the first school for the blind, L'Institution Nationale des Jeune Aveugles, in Paris (1784). The establishment of these institutions prompted the founding of schools for invalids (Germany, 1832; Great Britain, 1886) and the feeble-minded (Austria, 1816; France, 1837). Other countries, including the United States, followed suit.

State-supported and private residential schools have provided most of the special educational facilities during the twentieth century. Some of these residential schools are exclusive to one type of handicapped student; some are for students with multiple handicaps; some serve students with varying handicaps. The first school for the deaf was founded by Thomas Hopkins Gallaudet in Hartford, Connecticut, in 1817; for the blind in 1829; for the mentally retarded, 1848.

The education of crippled children was made a part of the Chicago Public School System in the late 1800s, and in 1899 a special school was established. Blind children were admitted to special classes in public day schools in Chicago as early as 1900.

Nearly a century ago, Dr. Samuel Gridley Howe[1] predicted the inclusion of

[1]Samuel Gridley Howe cited by R.B. Irwin, *As I Saw It*. (New York: American Foundation of the Blind), 1955, p. 154.

blind students in the regular classroom when he stated:

> With a view of lessening all differences between blind and seeing children, I would have the blind attend the common schools in all cases where it is feasible . . . Depend on it, one of the future reforms in the education of the blind will be to send blind children to the common schools, to be taught with common children in all branches not absolutely requiring visible illustrations, as spelling, pronunciation, grammar, arithmetic, vocal music, and the like. We shall avail ourselves of the special institutions less, and the common schools more.

The Due-Process Precedents

One of the facets of an adequate, free education for all individuals was brought forth in the case of Brown vs. Board of Education in which the fact of discrimination based on race was found to be unconstitutional in the provision of state-supported education. Thus, individuals of any race are entitled to equal educational opportunity and the principles of equal opportunity and due process were affirmed.

In 1972, the state of Pennsylvania, by law, exempted from compulsory school attendance those students who were felt to be incapable of benefiting substantially from continued attendance. The Pennsylvania Association for Retarded Children (PARC) brought suit on behalf of retarded persons which resulted in the establishment of the principle that handicapped persons are entitled to equal educational opportunities. Furthermore, the decision provided the basis of a later interpretation that all people are educable, even if to varying degrees, and that provision must be made for a due-process hearing before a student is denied admission to a public school or has his or her educational status changed. Thus, the concept of the "least restrictive alternative" came into being.

The Mills vs. Board of Education for the District of Columbia established the first legal precedent for the principle set forth in the PARC case. The suit was brought to court on behalf of 43 handicapped children. In this case, the court also established that if programs were to be reduced because of lack of funding, all programs should be reduced equally. Again, the principle of equal educational opportunity for all students was reinforced. These cases, as well as the case of LeBanks vs. Spears (Louisiana) also helped to develop the concept that handicapped students and their parents were entitled to dispute decisions regarding placement of handicapped students.

The Philosophical Roots

In writing of the extended educational experiences for handicapped people, Tindall and Gugerty[2] stated that "The philosophical roots of these opportunities are embedded in the principle of normalization and the principles of equal opportunity and due process expressed in the United States Constitution."

Because most handicapped individuals will not lead their lives in isolation from the rest of society, many parents, students, and others have long advocated that education, too, should be provided in a normal setting. Handicapped

[2]Lloyd W. Tindall and John J. Gugerty, *Least Restrictive Alternative for Handicapped Students*, The National Center for Research in Vocational Education, Columbus, Ohio: The Ohio State University, Information Series No. 143, 1979, pp. 1-2.

individuals need the opportunity to acquire skills and knowledge in the same type of environment as that of an average individual. Students should be afforded the opportunity to live at home and experience the joys and frustrations of living in a less protected environment than that of a residential school. The preparation for the future is thus obtained in the same kind of community in which the handicapped person will ordinarily live. Opportunities to meet and know people across a wide spectrum of society will be possible. Behaviors will be modified by a peer group which is not restricted to those sharing the same or similar handicaps.

Public Law 94-142

In 1975 landmark legislation, P.L. 94-142, Education for All Handicapped Children, was passed by Congress. This law established uniform standards for educating handicapped individuals from ages 3- to 18-years of age, commencing in 1978. In 1979, the range was to include the 18- to 21-year olds also. However, the age ranges are not applicable in those states where compulsory school attendance does not include these age groups. Thus, the legislative body mandated the implementation of programs to support the philosophical concept that all individuals, regardless of handicapped conditions, are entitled to equal education opportunities in the least restrictive environment.

> Handicapped children are those who are identified as mentally retarded, hard of hearing, deaf, speech impaired, visually handicapped, seriously emotionally disturbed, orthopedically impaired, other health impaired, deaf-blind, multihandicapped or as having specific learning difficulties, who because of those impairments need special education and related services.[1]

In addition to the fact that previous court decisions have culminated in the passage of P.L. 94-142, Zettel and Ballard[2] cited:

> . . . handicapped children have also won (1) the right to non-discriminatory testing, evaluation, and placement procedures; (2) the right to be educated in the least restrictive environment; (3) the right to procedural due process of the law; (4) the right to a free education, and finally (5) the right to an appropriate education.

According to Tindall and Gugerty:[3]

> P.L. 94-142 represents a major attempt to change the values of educators. The regulations for implementation of P.L. 94-142 support educational values which emphasize the adjustment of the educational environment to suit the learning needs of individual students. These needs are determined by steps which provide the student with 'equal opportunity' for educational success. Through an assessment and planning procedure students can now participate in the decision-making sequence and the formulation of an educational plan. This attempted change in the underlying values of many educators has implications in the areas of policy formation, curriculum planning, teacher training, resource allocation and program accountability.

[1]Federal Register, 1977, p. 42478.

[2]Jeffrey J. Zettel and Joseph Ballard, "The Education for All Handicapped Children Act of 1975 — P.L. 94-142: Its History, Origins, and Concepts," *Journal of Education*, Vol. 161, No. 3 (Summer 1979), p. 12.

[3]Tindall and Gugerty, *op. cit.*, p. 5.

Although the legislation is frequently referred to as the "Mainstreaming Act," the word mainstreaming is not included. Instead the term *least restrictive environment* is used to describe the educational setting for the handicapped student. The term *least restrictive environment* stems from the belief that handicapped students should be allowed the opportunity to participate in the same type of environment as they will encounter as adults in the mainstream of life.

Involvement of the business educator in providing education in the *least restrictive environment* is not the individual's or the school's option. The passage of P.L. 94-142 contained no provision for gradual or voluntary implementation. The time table for this commenced October 1, 1977, with a free, appropriate education to be guaranteed for all handicapped children, ages 3 to 18. From October 1, 1979, the range was extended to include 18- to 21-year olds. For many years, business education teachers have accepted the responsibility of and concern for providing personal and vocational skills and knowledge to students — including many handicapped students. However, in many of these instances, little in the way of special materials, equipment, or methods was used.

The least restrictive environment becomes a judgmental factor inasmuch as a handicapped student is to be educated in the regular classroom unless this creates a situation in which the individual is considered to be disruptive to the class as a whole. Too, attendance in the public school is not mandatory for those who prefer other educational options.

The Individualized Educational Programs (IEP)

The second major aspect of Public Law 94-142 is the concept of individualized educational programs for handicapped students. Each student is to have an individually prescribed program of studies, containing short- and long-term goals, based on diagnosis of the student's learning abilities. The Law[4] states:

> A written statement for each handicapped child developed in any meeting by a representative of the local educational agency or an intermediate educational unit who shall be qualified to provide, or supervise the provision of, specially designed instruction to meet the unique needs of handicapped children, the teacher, the parents or guardians of such child, and whenever appropriate, such child, which statement shall include (a) a statement of the present levels of educational performance of such child, (b) a statement of annual goals, including short-term instructional objectives, (c) a statement of the specific educational services to be provided to such child, and the extent to which such child will be able to participate in regular educational programs, (d) the projected date for initiation and anticipated duration of such services, and appropriate objective criteria and evaluation procedures and schedules for determining, on at least an annual basis, whether instructional objectives are being achieved.

Since the business teacher will be involved in the planning and implementing of the instructional program for the particular business course in which the handicapped students are enrolled, the teacher should make every effort to participate actively in the development of the IEPs. This active participation will help to insure that unrealistic or unreachable goals are not established for those phases of the students' programs which include the business

[4]Public Law 94-142, Education for All Handicapped Children Act, November 29, 1975, Sec. 4, a, 19.

teacher's area of expertise. The IEP is not a binding contract but does serve as the specific guide for the student's education. Furthermore, planning appropriate instruction is crucial if handicapped students are to achieve their highest level of skill in the particular business classes involved. A side benefit of active business teacher participation in the writing of the IEP is the opportunity for working directly with the special education personnel, the students' parents, and the administration. Direct communication will help to prevent misunderstanding or confusion on the part of all parties involved.

One facet of the role of the business educator — or any other teacher — is to provide information to appropriate persons for the identification of students with special needs. The major parts of the teacher's role, however, are those traditionally associated with helping students to learn — instructing and evaluating students. However, assisting students with special needs will probably require that the teacher reexamine methods, materials, motivational devices, and evaluation techniques. These will be discussed in more detail in Chapters 3 and 4.

Diagnosis. Two vitally important elements essential to the development of the IEP are those of diagnosis and task analysis. The task analysis is based upon the interpretation of the diagnostic reports pertaining to the handicapped student.

The individual with special needs must first be identified, tested, and evaluated for learning according to the diagnosis of the special need. Once the diagnostic reports are adequately interpreted, the development of an appropriate program begins. Acting cooperatively, the business teacher, special education resource persons, and other key professional staff members begin the process of planning the educational program for specific individuals. The basis for the planning is the development of the learner's profile which includes information about the student's learning strengths, weaknesses, and occupational interests.

Task Analysis. Inherent in the development of an IEP is the need for business teachers to realistically assess methods, media, and content pertinent to any given course or occupational cluster. For the first time, business teachers may realize that not every student needs to complete every part of any one course. For example, a totally blind student cannot proofread typewritten production or write manual shorthand. However, many blind persons earn their living as transcriptionists or secretaries.

A study must be made of available resources and the competencies required for work in today's society. Each individual program for a special needs learner is planned, implemented, and evaluated by a team composed of representatives from the aforementioned areas of expertise. Periodic assessment of the learner's progress is used to provide information not only of educational gains but of the status of the handicapping condition.

According to Phelps,[1] a career cluster analysis is similar to a job or task analysis. The planners are identifying skills, knowledges, and basic competencies to be incorporated into the individualized instructional plans for the learner. Thus, the team must identify tasks and the essential knowledges and skills necessary for the performance of the task within designated occupational clusters and/or courses. Additionally, the team must determine the competencies and the

1. Allen Phelps, *Instructional Development for Special Needs Learners: An Inservice Resource Guide*. Normal, Illinois: The Illinois Network of Exemplary Occupational Education Programs for Handicapped and Disadvantaged Students, n.d., p. 121.

levels of competency that can realistically be achieved by the special needs student.

The Interactive Legislation

In addition to Public Law 94-142, there are two other important public laws which affect students with special needs. Although P.L. 94-142 overshadows the other relevant laws in public awareness, the business teacher should become familiar with these other laws. Briefly stated, *Public Law 94-482*, Education Amendments of 1976, requires that vocational training shall be accessible to persons of all ages in all communities — including handicapped and disadvantaged persons. Additionally, funds are to be made available for this purpose. Public Law 93-112, Vocational Rehabilitation Amendments of 1973, provides protection from discrimination based on a handicap in programs or activities which receive federal funds.

The far-ranging implications and realities of the importance of Section 504 were cited by Califano[4] when he stated:

> Today I am issuing a regulation, pursuant to Section 504 of the Rehabilitation Act of 1973, that will open a new world of equal opportunity for more than 35 million handicapped Americans — the blind, the deaf, persons confined to wheelchairs, the mentally ill or retarded, and those with other handicaps.
>
> The 504 Regulation attacks the discrimination, the demeaning practices and the injustices that have afflicted the nation's handicapped citizens. It reflects the recognition of the Congress that most handicapped persons can lead proud and productive lives, despite their disabilities. It will usher in a new era of equality for handicapped individuals in which unfair barriers to self-sufficiency and decent treatment will begin to fall before the force of law.

The Inherent Challenges

When one realizes that one of every eight school-age children in the United States is rated as handicapped, one wonders at the immensity of the challenge to provide a free, appropriate education for *all* children. There are several major challenges which must be met soon for those handicapped students who are now integrated into the public schools and for those who will be attending in the future.

Inadequate Training for Teaching Handicapped Students. The problem in many schools lies in the fact that many regular teaching staff members have not had special training for teaching handicapped students. In addition, special education staff members do not have expertise in the teaching, guiding and counseling for all types of handicapped students. Moreover, there is limited availability of special resource consultants to provide adequate in-service education. As a result, the effects of the mainstreaming efforts have been, in some instances, mixed; in others, negative; in some, positive.

One reason for this lag lies in the fact that the law was designed for implementation several years after its passage, but the regulations accompanying the Law were not issued until much later. Thus, many school systems did not seize the opportunity to start preparing staff and facilities. Nor

[4]Joseph A. Califano, Jr., Secretary of Health, Education, and Welfare, Statement made on April 28, 1977.

did many collegiate institutions gear the special education offerings to meet the approaching needs of the regular classroom teachers.

Maintenance of Facilities for Some Handicapped Students. Parents of some severely handicapped children do not want them exposed to the trauma which might be involved in attending classes with normal children. A challenge thus lies in the ability of society to retain residential or day school facilities for the severely handicapped individual and at the same time integrate handicapped students into the regular classrooms. This is an extremely costly project when we consider the expense of staffing, equipment, special personnel, aids, and facility modifications. Not all students desire nor should be required to be educated in regular classrooms. As a consequence, means of funding public education must be reassessed so that adequate monies are available.

Provision for Appropriate Materials. Another challenge lies in the lack of pooled resources available to school districts when needed. If each teacher of the deaf, the blind, or the mentally retarded is to prepare special materials for each student, then compensatory measures are needed: released time, teacher aids, resource persons, reduced class sizes, etc. A city-wide or state-wide repository of text and other learning materials in various forms and at various levels would be much less costly than for each school to purchase a wide variety of basic textbooks and other aids at many different reading levels. For example, how many times will a rural school need a braille dictionary? Even the brailled version of a pocket-sized dictionary requires several volumes.

Social Acceptance. Another major concern in the education of students in the least restrictive environment, and perhaps the most important of the various challenges, is that of acceptance by families, peers, administrators, and the general public.

> They (the handicapped) are different. They trouble us in deep, unexplainable, irrational ways. We would like them somewhere else — not cruelly treated, of course, but out of sight and mind.[9]

Martin, who worked closely on the development and design of the federal program for educating handicapped students, used this statement to summarize the major historical response of society — our schools and our culture — to handicapped peoples' needs. He voiced concern that students will be subjected to frustrating and painful experiences if plans are not made for societal patterns of response to the needs of the handicapped. ". . . with the newly recognized *rights* of children to the education we offer, there must be an equal *responsibility* to see that those rights are truly fulfilled."[10]

Although ultimately all individuals face acceptance or rejection, rejection in the formative years may have devastating effects on the child's self concept. As a consequence, since children imitate their elders, adults need to proceed with caution in demonstrating any negative behavior toward the handicapped student or behavior which creates negative feelings in other children. This does not preclude necessary disciplinary actions. Indeed, an overly protective or solicitous attitude may create negative reactions in others. Instead, adults should strive to treat each child as equitably as possible and encourage others to do the same.

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[9]Edwin Martin, "Some Thoughts on Mainstreaming," *Exceptional Children*, Vol. 41, No. 3 (November, 1974), p. 150.

[10]*Ibid.*, p. 153.

CHAPTER 2. CONCERNS AND ISSUES

Public Law 94-142 has created concerns and issues among various groups within our society. Many of these are long-term issues; others are of more immediate concern.

Population

Acting under federal orders, educators across the United States are tackling the job of bringing five million plus handicapped students into the nation's schools.[1] These five million plus handicapped students can be broken down into categories as follows:

Handicapped Children Ages 6 through 17	
Blind, visually impaired	42,800
Deaf, hard of hearing	246,000
Crippled	213,900
Speech-Impaired	1,497,100
Emotionally disturbed	855,500
Mentally retarded	983,800
Learning-disabled	1,283,200
Multihandicapped	25,700
	5,148,000
Handicapped children in private schools, total	516,000
Total	5,664,000

(Source: U.S. Depts. of Health, Education and Welfare, and Commerce, 1979)

Identification

A word of caution at this point. According to some authorities, attaching disability labels to students with learning problems, especially those of a marginal or mild variety, may have a detrimental effect. Dunn[2] argued that such designations become destructive, self-fulfilling prophecies. When pupils are labeled as handicapped, a logical explanation is provided for why they are not learning. As a result, the teacher does not expect them to learn very much, and they don't. Perhaps an appropriate expression relating to the handicapped should be considered "Put labels on jars, not on children."[3] However, according to Tomlinson and Faber:[4]

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[1]"Latest in Dealing with Handicapped Students," *U.S. News and World Report* (February 27, 1978), p. 49.

[2]Lloyd M. Dunn, *Exceptional Children in the Schools* (New York: Holt, Rinehart & Winston, Inc., 1973), p. 5.

[3]*Ibid.*

[4]Robert M. Tomlinson and John N. Faber, "Concepts and Issues Concerning Special Needs Students," *School Shop* (April, 1978).

> The legislation and regulations dealing with special needs students carry provisions for the identification of individuals who are eligible for the services provided under the legislation. Criteria must also be established for use in the identification process; and, criteria inherently lead to some type of classification or label. The only way found to assure that the funds do, in fact, serve those intended is through an individual identification and record keeping process that can be audited.

Where are the five million plus handicapped students is a question that not only has an impact on the teachers, and administration, but also on the handicapped students themselves. Various "child find" programs are in existence to begin identifying handicapped children at a very early age.

Where these handicapped children live is tremendously important, as historically some state and local education agencies have had successful programs even before the federal government became involved. An example cited in the *U.S. News and World Report*[5] is a Michigan law on special education passed in 1971 which actually covered a wider age range than did the existing federal law. The federal laws at that time dealt primarily with students from ages 6 through 17, whereas the Michigan law extended those boundaries.

Within states, local education agencies have a significant impact on the handicapped students' education. In many areas of the country special education districts and agencies are established to facilitate that education. Groups of students with the same handicapping condition are often bused to one centralized school. Depending on the population density, these students might come from up to a twenty-five or more county area to a large metropolitan area which may have one or more identified "magnet" schools. The purpose of this procedure is to provide more specialized services to the handicapped students by having available trained professionals in the special education field. They, in turn, provide supportive services that might not be available to all schools in all districts.

Advantages and Disadvantages of Labeling. Indirectly Public Law 94-142 specified that the various handicapped individuals be identified for purposes of diagnosing their learning difficulties and for assessing their probable achievable goals in order to complete the individualized educational programs. Because of funding, the labels or categories provide an easier means of communication. The major disadvantages are those of problems in misidentifying the students and in creating attitudinal problems on the part of educators, parents, the handicapped and other students.

Social Implications

According to Halloran,[6] attitudinal barriers have continually presented themselves and can be considered responsible for much of the limited access handicapped persons have experienced to date. Many nonhandicapped persons lack knowledge and awareness of the needs and problems of the handicapped, often causing the nonhandicapped person to feel uncomfortable in the other's presence. An attitude of paternalism often exists, and this protectiveness is reflected in statements that handicapped persons are not capable of taking care

[5] "Latest in Dealing with Handicapped Students," *U.S. News and World Report, loc. cit.*

[6] William D. Halloran, "Handicapped Persons: Who Are They?" *American Vocational Journal* (January, 1978), p. 31.

of themselves. Handicapped persons are thus made aware of their limitations and, in the process, are prevented from discovering their talents.

Very often one's experience, whether it be positive or negative, with a person having a specific handicap is generalized to the total population with that handicapping condition. A wheelchair-bound paraplegic student that you may have taught went on to become a successful C.P.A. That experience would probably evoke a very supportive attitude towards others who share that particular handicapping condition. To understand the handicapping condition, to understand the person as an individual, and to recognize that they are separate and distinct, will help alleviate the negative social implications involved in working with handicapped students.

The attitudes and social implications in the school setting also tend to lean toward a focus on the handicapping condition rather than the individual. The school administration often sees the handicapped students as meaning more paper work (IEPs, etc.), transportation problems (special buses, special routes), administrative problems (support personnel), and financial problems (ramps, interpreters). The teacher in the classroom is often not informed that a handicapped student or students will be in class until the day before school starts. The teacher's lack of information is not the handicapped students' fault, but nevertheless may result in a less than positive attitude toward and acceptance of the students.

Teacher training programs are providing emphasis on working with mainstreamed handicapped students. In many colleges and universities, part of the course work includes psychological and social aspects of the handicapped. The course work helps develop an understanding of the various handicapping conditions beyond the medical and physical definitions to include an attitude of advocacy which is so important for success.

The fact that children are growing up and interacting with each other, be they handicapped or not, will help diminish the attitudinal barriers in years to come. With mainstreaming, students are exposed to handicapped and nonhandicapped students alike. This is a plus for mainstreamed students over their attendance in residential and day school programs. Historically, these programs have had a tendency to minimize the interaction between handicapped and nonhandicapped persons.

Financial

For many school districts the monetary problems are the immediate concern — how much money will be needed, how to obtain the funds, how will the accountability for the students be handled, etc. Nationally, the additional costs for the first year alone were estimated at two billion dollars, of which only 254 million was to be contributed by the federal government.[7] At the state level, state education agencies frequently offer assistance to handicapped individuals through such offices as the Division of Vocational Education, Department of Adult, Vocational, and Technical Education, or the Bureau of Education of Exceptional Students.[8] State education agencies are frequently given federal funds in the form of grants which are available to local districts for students with

[7]"Latest in Dealing with Handicapped Students," *U.S. News and World Report, loc. cit.*

[8]*Another Step Forward—A System of Management* (Gainesville, FL: Special Education Department, University of Florida), n.d., p. 2.

special needs.

The major financial concerns can be classified in two main areas: personnel and materials. Personnel includes not only the special education resources and support personnel, but also increased regular staffing to reduce the teacher/pupil ratio to facilitate success for both the handicapped and nonhandicapped students. Materials including special equipment and equipment adaptation are costly. Special buses, lavatories and ramps are just a few examples. In the classroom, however, there are materials and techniques that may be adapted quite inexpensively when compared to the examples listed above. As they are visually oriented, hearing impaired students, as well as others, benefit from expanded use of transparencies. Arm rests and guide supports can be built quite easily at relatively little expense for cerebral palsied typewriting students.

The classroom instructor is often frustrated when discussing financial concerns. Perhaps this is due to previous experience. However, working with handicapped students in a mainstream situation is a relatively new experience for teachers, administrators, and school boards. As advocates, individual teachers can do a service to the students and themselves in helping to support and educate administrators toward the needs of the handicapped students.

Staffing

As explained earlier in this chapter's section on population, special education resource personnel may often be present in your school, but may not be employed directly by the school district. Instead, they are employed by a group of districts in a cooperative endeavor or association. Special education resource personnel and specialists therefore can be employed to provide necessary services to the handicapped students; services that might not normally be available because of cost and manpower utilization.

Unfortunately, there are often various titles or positions with similar responsibilities. Similar sounding titles may have significantly different responsibilities. The following is a list of a number of special education resource personnel and specialists:

Exceptional Student Education Teacher: Person responsible for helping the educator understand the characteristics of handicapped students. Also responsible for interpreting the pupil diagnostic assessment in relation to occupational skill requirements.

Paraprofessional Teacher: Staff assistants who provide individualized instruction to handicapped students. Close contact with students helps the assistant have a clear understanding of their needs and problems.

Guidance Counselor: Although not thought of generally as special education personnel, the guidance counselor is often responsible for coordinating the Individualized Education Plan staffing. In addition, in a number of schools one counselor is responsible for all handicapped students and in effect may be a specialist in that area. Regional education associations may hire counselors with specialized training to serve a specific handicapped population such as hearing impaired or behavior disordered.

Itinerant: A special education teacher who travels from school to school and meets a number of different students to assist them in their mainstreamed programs. Itinerants may spend as little as a half hour a week with a student or up to an hour or more a day.

Resource Teacher: For the handicapped student who is not in as many of the regular classes as the student who is served by an itinerant, the resource teacher provides many of the necessary specialized services. The student may stay with this teacher for several periods of the day or even all day in the case of severely handicapped students. The resource room is occasionally termed "self-contained" as a majority of the educational processes may occur in the one contained classroom.

School Social Worker: The role of the school social worker emerges in a new place of importance because Public Law 94-142 requires parent participation in the development of the IEP.

Special Area Professionals: This group would include audiologists, speech clinicians, occupational and physical therapists, and educational specialists with specific training in one or more handicapping conditions.

District Vocational Rehabilitation Counselor: An employee of the state, the vocational rehabilitation counselor has a role in defining the special needs population and identifying which students shall receive specialized vocational education services. The vocational rehabilitation counselor may be very helpful in developing a career and training plan and in facilitating job placement at the completion of schooling.

Specialist/Aide: The specialist/aide may be a reader for the blind, notetaker, sign language interpreter for the hearing impaired, or attendant for the physically handicapped.

Work Evaluator: May also be titled Evaluator; this person provides an excellent source of information about work skills, interests, and aptitudes of a student. Utilizing standardized tests, actual job try-out samples and personal observation to collect information are part of the work evaluator's responsibilities.

Materials and Methods

The development of educational materials for the handicapped has been hampered in the past because of the relatively small population that would use the products developed. The emphasis until recently has been in educating students in centrally located state-supported schools designed especially to meet the needs of a population with a specific handicapping condition.

Each state typically would have one or perhaps two residential state-supported schools designed especially to meet the needs of a population with specific handicapping conditions. Most states had one or perhaps two residential state schools for the deaf, blind, or mentally retarded students. In addition, large metropolitan areas set up day programs in schools which were similiar to the residential school programs that existed.

Further, to develop a typewriting book for use by, at the most, 100 schools for the blind would be so specialized that marketability success would be doubtful; costs would be prohibitive. Also, because of geographic distances, instructors in specific curriculum areas seldom have the opportunity to meet and share ideas and teaching strategies.

The impetus of educating students in the least restrictive environment has involved a great many more instructors than previously had contact with physically handicapped students in any given discipline. The result is that there is a much greater marketability for either new or adapted materials.

In addition, local, state, and national conferences and professional meetings are now providing the opportunity for teachers to meet and share successful instruction techniques and materials. A number of state and federal agencies offer grants for innovative programs for the handicapped. In this way, a group of instructors can pool their efforts and talents and be compensated for the efforts as well as improve the education of handicapped students.

The awareness of colleges and universities of the handicapped population is growing, although perhaps not quickly enough for some individuals. Conducting research and developing special materials for a specific handicapping condition could be a worthwhile topic for research papers, theses, or independent studies.

Instructors often realize that they need help but do not know where to turn. Special interest groups, advocate groups, parent groups, state residential schools, state rehabilitation offices and state boards of education are among some of the many possibilities for help.

Awareness of Special Methodology. Both parents and regular classroom teachers should be aware of alternative methods and aids which can be beneficial to handicapped students. Although Chapter 4 will provide specific suggestions, some general instructional techniques which may be applied regardless of the varied handicapping conditions are presented. If in the classroom there is only one student with a handicapping condition, it may be feasible to start the class with an activity which will permit a few minutes for individual consultation with the student. Even though this approach is somewhat idealistic, there are often students who have not been identified as handicapped that also need individual attention and thus one is not "highlighting" the handicapped student by that attention.

A possible alternative is that of the *peer system*. This practice has been observed during visits to several schools, as well as in a number of films about teaching the physically handicapped. Students that have exhibited strengths in an area are matched with handicapped students and offer peer support toward mastery of the skill or assigned task. A positive reinforcement is to have the handicapped student with a particular strength work with a nonhandicapped student who may be weak in that area. This fosters more of a give-and-take attitude instead of a give-and-give attitude.

The utilization of paraprofessionals, student teachers, itinerants, or other persons may facilitate instruction and success for *all* students, not only the handicapped. Parents, too, can provide meaningful insights into their children's abilities and self-concept which will be meaningful to all who are involved in the education of all of America's students.

CHAPTER 3. HANDICAPPING CONDITIONS AND INSTRUCTIONAL APPROACHES

> Many students with physical, visual, and hearing impairments are in fact already in the classroom. The largest number to be served are those with less visible handicaps — persons with mental, learning, and emotional handicaps.[1]

In this chapter some curriculum modifications are presented through a description of handicapping conditions. Since the realm of business education encompasses so many different specific course content areas, the emphasis will be on the handicapping condition rather than the specific course area.

Mild and Moderate General Learning Disability

The title, Mild and Moderate General Learning Disability, is the preferred term to the more commonly used designation, Mentally Retarded. This term carries a stigmatizing connotation of social incompetence. The terms previously used for grouping take on a rather negative connotation also; educable, trainable, and custodial. For the purpose of this section the terms mild and moderate, as cited by Dunn, will be used for students who obtain IQ scores of 60 (±5) to 75 (±5) and 35 (±5) to 60 (±5) respectively.[2]

The majority of business educators will come in contact with students classified as having mild, general learning disability; therefore, emphasis will be placed on that group. Overall curricular objectives would include the following:

(1) Basic readiness and practical academic development;

(2) communication, oral language, and cognitive development;

(3) socialization, family living, self-care, recreation, and personality development; and

(4) prevocational and vocational development, including housekeeping.[3]

With these objectives in mind, educators can then begin to apply their energies in the classroom toward the meeting of the above mentioned goals.

Individualized instruction is important because in order to meet the foregoing goals the emphasis on academic subjects and mastery of subject matter has to be waived in favor of developing entry-level skills in the career area. There must also be systematic programming of learning experiences and provisions for immediate reinforcement. Part of the varied classifications for students include their educational progress as compared to a norm. If the students progress at only one-half to three-quarters as fast as the norm, this has to be taken into consideration in each lesson and exercise assigned.

The emphasis has heretofore been on intellectual development. However, motor development is also very important. As one is aware, in the skill areas, first

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[1]Lloyd W. Tindall, "Education for All Handicapped Persons: A Mandate for the New Year," *American Vocational Journal*, Vol. 53, No. 1 (January, 1978), p. 29.

[2]L.M. Dunn (ed.), "Children with Mild General Learning Disabilities," *Exceptional Children in the Schools — Special Education in Transition*, (New York: Holt, Rinehart and Winston, Inc.), p. 71.

[3]*Ibid.*, p. 164-65.

come the gross motor movements followed by the finer motor movements and finally the perceptual motor skills. Based on years of experience, educators generally believe that the heavy emphasis on imitation has been the most successful. Currently there is a movement toward clinical diagnostic, or prescriptive teaching processes wherein the emphasis is on *how* to study and teach, not *what* to teach.

> The total process includes seven steps: 1) a general area of behavior is designated for attention; 2) the child is studied to find out what behavior he has acquired along this dimension; 3) specific behavioral objectives which need to be acquired next are identified; 4) the relative effectiveness of different motivators and reinforcers are investigated; 5) the most effective modalities for reaching the child are identified; 6) the needed materials for implementing the instructional program are assembled; and 7) the best strategy is determined to teach the child the identified specific behaviors.[4]

This method, which entails a considerable amount of time, is basically individualized and best suited to a self-teaching or individual tutoring situation.

Students in this classification experience continuous and growing lags in educational development. Thus the school, when establishing the IEPs and identifying competencies for the student, should place emphasis on occupational skills. Dunn[5] advocates that between 40 to 70 percent of the students' time should be directed toward this area. In developing the plan it is important to assess accurately the job market and the requisite skills needed for entry level employment. Rather than try to teach all elements of retailing and not succeed, ascertain what skills are needed for a stock person and work with the students until they have mastered those skills. Because of prejudices arising from ignorance, appropriate placement in employment may well also fall on the shoulders of the business teacher.

Behavioral Disabilities

> Behavioral disabilities are defined as a variety of excessive chronic deviant behaviors ranging from impulsive and aggressive to depressive and withdrawal acts (1) which violate the perceiver's expectations of appropriateness, and (2) which the perceiver wishes to see stopped.[6]

To this is added a competency heirarchy developed by Hewett:[7]

(1) objectivity — the ability to evaluate teaching progress and to separate the problems of the teacher from those of the pupil;
(2) flexibility — the ability to make rapid shifts and adjustments to meet the pupil's needs;
(3) structure — the ability to set and maintain reasonable standards;
(4) resourcefulness — the ability to innovate and try new approaches when old ones are not working;
(5) social reinforcement — the ability to deliver positive social reinforcement to pupils;

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[4]*Ibid.*, p. 163.
[5]*Ibid.*, p. 175.
[6]P.S. Grauband and M.B. Miller, *Behavior Disorders*, edited by G.O. Johnson and H.D. Blank (Arlington, VA: Council for Exceptional Children, 1968).
[7]F.M. Hewett, *The Emotionally Disturbed Child in the Classroom* (Boston: Allyn & Bacon, 1968).

(6) curriculum expertise — the ability to match appropriate curriculum content and methods to the pupil;
(7) intellectual model — the ability to serve as a model to stimulate creativity and the acquisition of knowledge.

Following are four instructional approaches as reviewed by Grauband. Although not specifically geared to the business education area, the approaches can easily be adapted to that particular discipline area. The first is categorized as the psychodynamic approach. Of this approach, the authors[8] state:

> . . . a climate of learning is not created by lesson tasks, assigned readings, lectures (except upon request), evaluation and criticism on the part of the teacher (again, except on request), and required examinations. Programmed instruction in which the student sets his own pace, simulations of experience and events, and work in small groups are methods that promote experiential learning. Rogers suggests the use of student-teacher contracts and is not opposed to the notion of basic encounter work in the classroom. The teacher, in his view, is like the therapist in non-directive therapy and the parent of the child on the way to maturity. He is not an authority or an evaluator. He provides the warm, accepting climate which facilitates significant learning.
>
> The behavioral-deficit approach is again largely child centered. It argues from the premise that the pupil's maladaptive behavior is primarily a result of frustration and failure in school, and perhaps elsewhere. The strategy is to determine the academic and/or social behavior deficits and to correct them. With success will come improved feelings of self-worth with a resulting diminution in the aberrant behavior. There is far from agreement on how to implement this approach.[9]

Morse described another variation of the behavioral deficit theme which he terms the "psychoeducational strategy." In this approach, concern is evidenced not only upon what, but why.

> . . . Hypotheses are determined and an education intervention is then devised and implemented, aimed at correcting the target behavioral deficit, be it academic or social. This could lead to a variety of interventions, including 1) reducing the pressure placed on the child; 2) teaching the child coping strategies; 3) focusing on teacher-pupil relations; 4) centering on peer-group relations; 5) changing the child's motivations; and 6) enhancing his self-concept.[10]
>
> The behavior-modification approach deals primarily with how to change over behavior. . . . The key to the behavioral approach can be found in the word 'contingency.' Positive or negative reinforcers are delivered contingent upon pupil's behavior.[11]

This approach has been written about innumerable times with a number of volumes devoted to the approach. Of interest in ascertaining a behavior is

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[8]V. Rezmierski and J.A. Kotre, "A Limited Literature Review of the Theory of the Psychodynamic Model," *A Study of Child Variance: Conceptual Project in Emotional Disturbance*, edited by W.C. Rhodes and M.L. Tracy (Ann Arbor, MI: University of Michigan Institute for the Study of Mental Retardation and Related Disabilities, 1971), p. 40.

[9]Paul S. Grauband, "Children with Behavioral Disabilities," *Exceptional Children in the Schools — Special Education in Transition*, edited by L.M. Dunn (New York: Holt, Rinehart and Winston, Inc.), pp. 272-73.

[10]*Ibid.*, pp. 273 & 293.

[11]*Ibid.*, pp. 274-75.

Lindsley's suggestion of the use of the "deadman's test." This measure may be used to avoid the creation of nonbehavior. For example, the rule states that, "if a dead man can do it, it is not behavior and therefore should not be used as a goal by teachers. Thus, getting into a seat would be an acceptable response on the part of the child, but merely sitting would not."[12]

The last approach discussed by Grauband follows:

> An ecological approach allows the practitioner to use the psychodynamic, behavioral-deficit, and behavioral modification techniques as well as to manipulate interpersonal relations and other aspects of the environment. It is the only approach that is not almost exclusively child centered. It differs from the other models in that it looks at the behavior of at least two people. . . . The difficulty with this approach is that it is hard to ascertain just where the ecosystem of any individual stops.[13]

Kirk and Gallagher[14] advocate the use of the following definition to aid in the determination of a student's specific learning disability:

> A specific learning disability is a psychological or neurological impediment to spoken or written language or perceptual, cognitive, or motor behavior. The impediment (1) is manifested by discrepancies among specific behaviors and achievements or between evidenced ability and academic achievement, (2) is of such nature and extent that the child does not learn by the instructional methods and materials appropriate for the majority of children and requires specialized procedures for development, and (3) is not primarily due to severe mental retardation, sensory handicaps, emotional problems, or lack of opportunity to learn.

Students with specific learning disabilities (SLD) will probably have been identified by the time they arrive in the business education class. With special supportive services and tutors, students can be brought up to grade level and succeed quite well. Perhaps this is one of the most often "labeled" groups and for this reason (with each new quarter or semester) teachers should go through students' files to see if they have any "special" students. When students are identified, however, teachers often fit these students into their own preconceived molds established by previous experience.

In the past, two diagnostic models have dominated the field: 1) the interdisciplinary team and 2) the individual school psychologist. These models have given way in recent years to teachers doing their own diagnosis; thereby being the center of the process itself. However, Dunn points out, ". . . this system has resulted in as many as three quarters of such students being mislabeled because their ethnic and linguistic backgrounds handicapped them in their school work and on the intelligence tests."[15]

Dunn[16] also cited that eight of the specific learning disorders most frequently encountered by teachers of SLD students are dysfunctions in the following areas: 1) motor; 2) visual perception; 3) auditory perception; 4) oral language; 5) reading; 6) spelling; 7) handwriting, and 8) arithmetic. Instructional strategies favor the

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[12]*Ibid.*, pp. 275 & 292-93.

[13]*Ibid.*, p. 279.

[14]Samuel A. Kirk and James J. Gallagher, *Educating Exceptional Children*, (Boston: Houghton-Mifflin Company, 1979), p. 285.

[15]Dunn, *op. cit.*, p. 179.

[16]Dunn, *op. cit.*, p. 543.

traditional strategy of "diagnostic teaching" along with a modification of that into a specific behavior objective for the pupil. A combination of the two is also workable. Another approach to diagnostic teaching is determine and teach to and through strengths of the student for better motivation and greater learning. Mild and moderate specific learning disorder students can often utilize instructional procedures developed through remedial education. Examples include utilizing individual tutors, helping teachers or consultants.

Hearing Impaired

> At the present time, the 'State of the Art' of integration of hearing handicapped children is not advanced. There are gaps in existing technology and knowledge — as well as a paucity of written information — concerning a systems approach to the admission and maintenance of hearing impaired children in regular classrooms on a partial or full-time basis. Models of pupil assessment, supplementary support services, inservice training, parent involvement, and evaluation subsystems are still in the process of definition.[17]

Northcott's quotation appears pessimistic, however, one must remember that it was published in 1973. A great deal of progress has occurred since that time.

Northcott[18] defines the hearing impaired person as follows: "A hearing impaired (deaf or hard of hearing) individual is a person who requires specialized education because of a hearing impairment."

For purposes of this chapter, hearing impaired is broken down into two main general categories — deaf and hard of hearing. Kirk[19] cited the classification formulated by the Committee on Nomenclature of the Conference of Executives of American Schools for the Deaf in 1938.

> **The deaf:** Those in whom the sense of hearing is nonfunctional for the ordinary purposes of life. This general group is made up of two distinct classes based entirely on the time the loss of hearing occurred. These include: (a) *the congenitally deaf* — those who were born deaf, and (b) *the adventitiously deaf* — those who were born with normal hearing but in whom the sense of hearing became nonfunctional later through illness or accident.
>
> **The hard of hearing:** Those in whom the sense of hearing, although defective, is functional with or without a hearing aid.

Of crucial importance is the time of the onset of the hearing loss. If the student lost his or her hearing at birth (congenital) or during the first year and a half of age and never experiences the spoken language, it is very difficult to use that language. This may also be referred to as prelingual. If onset of deafness is after language and speech have been developed, it is termed adventitious or postlingual.

The heart of the educational problem for the deaf student is language development.

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[17]Winifred H. Northcott (ed.), *The Hearing Impaired Child in a Regular Classroom: Preschool, Elementary, and Secondary Years* (Washington, D.C., The Alexander Graham Bell Association for the Deaf, Inc., 1973), p. 1.

[18]*Ibid.*, p. 2.

[19]Kirk and Gallagher, *op. cit.*, p. 181.

> An analysis of average deaf adults' language in comparison to the hearing person shows that they use: (a) relatively simple language units, (b) shorter sentences, (c) fewer verbs, (d) no shades of meaning, (e) very few synonyms, (f) simple fixed expressions, (g) they explain the 'why' very often, (h) describe only concrete actualities, (i) rarely mention possibilities, (j) avoid the abstract.[29]

Misconceptions About Language. There are two common misconceptions concerning the deaf in relation to language skills: (1) that deafness is a speech problem, and (2) that learning can proceed automatically through lip reading and reading.

Deafness is more than a speech problem. Many individuals have thought that a deaf person's speaking problems can be corrected with the use of a hearing aid and the enrollment in speech classes. However, a hearing aid is a mechanical device which amplifies sound — it does not correct speech. Speech is in fact an ancillary problem and "verbal language" is the generic problem. Speech is only the physical production of language. It is possible to have good language comprehension and no speech at all.

Language learning for the deaf cannot proceed automatically through *lip reading* and *reading*. In fact, these skills do represent major compensations for deafness but they must be *learned before* they can be *applied*. These skills can only be *learned in conjunction* with language. Lipreading is not a magic cure. Even when lipreading ability is above average, there are still problems, for example, lipreading a variety of people who use different mouth movements, who use a variety of facial expressions, who have mustaches, protruding teeth, and so forth.

In addition, only 40 percent of the English language can be seen on the lips and 40-60 percent of English sounds are homophenous, that is, words of completely unrelated meaning which look exactly alike on the lips — abuse, amuse; peach, bleach. Therefore, it is not surprising that many bright deaf adults understand less than five percent of a message when depending on lipreading alone; in a one-to-one situation, they understand less than three percent. Some of the most skilled lipreaders are hearing adults who have never had a lipreading lesson.

Language can be taught to a deaf child once the child is in school. Many linguists believe that there is an optimal period, the first three to six years of a child's life, for language development. In order for normal verbal language to develop there must be a combination of *intact hearing, undamaged linguistic capacity and proper language stimulation*. This theory is called the "Critical State Hypothesis."

When a deaf student is enrolled in an accounting class and given a test with essay questions, one is likely to receive answers such as "Assets balance debit." This short choppy sentence termed "telegraphic" is indicative of language development among deaf students. Hence a recommendation that if testing a hearing impaired student's mastery of the material presented, test that student on that material rather than language and writing skills. This same problem continues for the profoundly hearing impaired student on multiple choice tests which have one small word out of place that the student does not identify and therefore selects the incorrect answer. Multiple choice tests often are reading

[29]New Mexico School for the Deaf, *Answers* (Santa Fe, NM: New Mexico State Library, Box 1629), p. 22.

tests. The average reading level for all prelingual deaf persons in the United States is somewhere between the fourth and fifth grade level. Very often the deaf students will learn the specific vocabulary required in a course by memorization, but then when it comes to applying that vocabulary they can correctly identify "bank reconciliation" but falter with the term "on-hand."

For a deaf student, the *least restrictive environment* may be in the classroom; however, more than likely substantial support services will be required. Qualified sign-language interpreters are a unique support service to the hearing handicapped. Unfortunately, this is often a one-to-one service and therefore expensive. If the students are deaf, by definition they do not understand speech so talking to them will be of little value. Hearing students can use carbon paper and take notes for the hearing impaired students since they cannot pay attention and write at the same time as can their hearing peers. (Pressure sensitive pads with carbonless paper called notetaker pads are available from the National Technical Institute for the Deaf in Rochester, New York.) Other recommendations can be found in Figure 1, page 24.

Business educators may not be familiar with hearing aids. Hearing aids are not a panacea as they only amplify sounds and more likely the problem is the discrimination of those sounds. Hearing aids are not selective, they amplify *all* sounds. Turning up the volume control on a hearing aid in a typewriting class will allow the student to hear the typewriter better.

A concern of hearing impaired students who have hearing aids is that of social acceptance by their peers. In elementary school, wearing a hearing aid was fine, but now in junior high school, anything that labels them as "different" such as a hearing aid is definitely not "in." This attitude does reverse when the students realize that their education is more important than their social acceptance.

A number of business educators for the hearing handicapped advocate a piece of adaptive equipment consisting of a micro-switch attached to the bell mechanism of a typewriter to energize a light to "tell" the hearing impaired student they are at the right margin. A disadvantage of this is that if the student goes out to work as a typist the special adaptive equipment probably will not be available.

Visually Impaired

Pupils with visual disabilities are by no means a homogenous group with common learning characteristics. It is misleading to think of students with visual disabilities as a separate group when their basic educational needs are generally similar to those of normally seeing students. Recent approaches emphasize differences in individual learning characteristics within the group rather than a traditional categorical treatment of a mythical group. This is due to a wide variance in abilities and needs.

For economic and legal purposes, the traditional means to define students with visual disabilities was a medical and physiological basis according to degree of visual acuity and the fields of vision. The legally blind are those who have central visual acuity of 20/200 or less in the better eye with corrective glass or who have a peripheral field so contracted that the widest diameter of such a field is 20 degrees. The legal definition of the partially seeing, with correction, is visual acuity between 20/200 and 20/70.

A more functional definition is required for educational purposes.

Educationally blind students are those who depend upon braille and other aids. Partially seeing students are those visually impaired persons who can read large print or regular print under special conditions.

As with other handicapping conditions, according to Foster, et. al.,[21] there is a continuum in the degree of integration from the most to least integrated. The teacher-consultant provides direct or indirect services as needed while the student is enrolled in the regular classroom. The itinerant-teacher plan is similar to the above except that the itinerant spends more time with the individual student. The resource room or resource-teacher plan is one in which students attend the regular classes for a majority of their work, but may return to the resource room for help as the need arises. The cooperative class is one in which the student is registered with the special educators but attends regular classes whenever possible. In the special class, the student is in a separate unit in which students are instructed by the special teacher throughout the day in a self-contained room. The residential school plan provides a complete educational program with residential facilities for the students.

A commonality may exist between the methods of instruction of the hearing and visually impaired in that the material to be covered may be the same but the method of presentation or media must be changed. Reading a story to a profoundly deaf person would have a similiar effect as giving a blind person the same story book to read.

Seeing is affected by factors such as 1) brightness, 2) size of image, 3) contrast, 4) time, and 5) distance. Generally, if any of these factors is increased beyond the minimum required to make vision possible, seeing becomes easier. A recent trend of special educational programs for visually impaired is the increasing emphasis on listening as a means of providing information. The result is increased learning efficiency of listening over large type and braille reading materials.[22]

Visually impaired students need specific, descriptive language in their education. Many people are accustomed to using nonverbal signals. For example, nonverbal signals are used to recognize students who wish to speak, to sympathize, to acknowledge, and to communicate in innumerable other ways. In addition, many things have been learned through sight but not discussed. Many television advertisements, for instance, contain visual items which are not explained yet are referred to by other students and friends. Many years ago, a blind friend told of being bewildered by reference to the Borden symbol, "Elsie, the Cow," until she finally asked what or who Elsie was.

Some cautionary hints:

- The characteristic achievement and fatigue of partially seeing students are important considerations in planning remedial programs for these students.
- Reduced vision is not a direct cause of a personal or social maladjustment but adjustment problems may result from negative attitudes toward loss of vision by seeing persons.
- Employment opportunities for visually impaired persons may be restricted due to negative attitudes toward visual impairments by employers.
- The visually impaired child usually needs stimulation so that he will use effectively his other sensory modalities to explore his environment.
- The visually impaired person needs to learn to use his remaining vision more efficiently to interpret visual stimuli.[23]

[21]June Foster *et al., Guidance, Counselling and Support Services for High School Students with Physical Disabilities* (Cambridge, MA: Technical Education Research Centers, Inc.), pp. 10-13.
[22]Dunn, *op. cit.*, p. 437.
[23]Dunn, *op. cit.*, pp. 442-43, 456-57.

Orthopedically Handicapped

> Orthopedically impaired means a severe orthopedic impairment which adversely affects a student's education performance. The term includes impairments caused by a congenital anomaly (e.g. club foot, absence of some member, etc.), impairments caused by disease (e.g., poliomyelitis, bone tuberculosis, etc.), and impairments from other causes (e.g. cerebral palsy, amputations, and fractures or burns which cause contractures).[24]

Additional needs of the orthopedically handicapped students may include the following: (a) prescriptive physical and/or occupational therapy, (b) accessibility to all school functions regularly observed by nonhandicapped peers, (c) mainstreaming with the assurance of continued support services, i.e., therapy, counseling, extraordinary transportation adaptations, etc. Students with orthopedic impairments may need the physical facilities adapted for them, but modifications of curriculum methods and materials probably will be necessary only when: 1) the disability is severe and permanent and will greatly influence future vocational and social competency; 2) the lack of normal experiences, absences from school, and the necessity of functioning at reduced speed may extend the amount of time required to complete prescribed courses; and 3) intellectual capacities and learning deficits may require the use of special methods and materials.[25]

Utilization of ancillary or support services is of importance not only to the handicapped student but also to the teacher as these services can provide assistance in assessment, curriculum planning, and vocational adjustment. The teacher's knowledge of the subject area coupled with the school psychologist and counselor's knowledge of the handicapping condition are imperative for success by the student.

Adaptive equipment has been developed, especially with the typewriter. There are typewriters for either left-hand or right-hand only people. There are masks for students with fine motor control problems. Text materials have been developed on how to operate the standard typewriter with one hand including home-row for left- and right-hand-only persons; also texts for students with missing fingers.[26]

Other Handicapping Conditions

Handicapped students will not be coming into your classroom with neatly defined handicapping conditions. A student with a specific learning disability may also suffer from diabetes. The term multihandicapped refers to concomitant impairments. Fortunately the percentage of multihandicapped students is very small and often are included in self-contained programs in residential settings. These students usually are placed for purposes of education on the basis of their one most severe disability.

Other health impaired may mean limited strength, vitality or alertness, due to chronic or acute health problems such as a heart condition, tuberculosis, rheumatic fever, nephritis, asthma, sickle-cell anemia, hemophilia, epilepsy,

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[24]Illinois State Board of Education, *Occupational Education for Students with Special Needs* (Springfield, IL, no date), p. 2.

[25]Guy Vollman, *A Compendium of Student Needs by Exceptional Areas* (DeKalb, IL, unpublished, no date), p. 7.

[26]*Typewriting Institute for the Handicapped Brochure*, Phoenix, AZ, unpublished, no date.

lead poisoning, leukemia or diabetes, which adversely affect a student's educational performance. The severity of the impairment will obviously have an effect on the methods and material adaptations of the curriculum. Equal importance must be weighed also in not singling out this type of student lest they be identified as "different." An awareness of the health problem and a knowledge of what to do should an emergency occur are requisites to success in handling that emergency and not worrying about it in the meantime.[27]

An unforgettable experience was observed at an in-service staff meeting. The presenter suffered from epileptic seizures. After presenting a movie and explaining proper procedures in the event a person should have a seizure, he asked for questions from the audience. A number of questions were very direct and the man was visibly uncomfortable. Suddenly he had a seizure and tumbled off the stage to the floor below. The audience was shocked and stunned. The man's wife, seated in the audience, nonchalantly stepped over her husband and climbed up on the stage and said, "Here is a perfect example of an epileptic seizure." She then went on to discuss the attending procedures to follow. Such a drastic instructional measure on how to handle emergencies is not recommended. However, the basic procedures to follow for seizures or insulin shock for a diabetic should be known.

[27]Dunn, *op. cit.*, p. 490.

FIGURE 1
SUGGESTIONS FOR CLASSROOM TEACHERS
TEACHING DEAF AND HARD OF HEARING PUPILS

The Hearing Handicapped Pupil Gains Information Through Lipreading

1. Assign the hearing handicapped pupil to a favorable seat, usually toward the front of the classroom. Remember — a hearing aid, unlike eyeglasses, does not provide total correction.
2. Face the child when you speak so the child can read your lips. As you speak, the light should be shining on your face, not in the child's eyes.
3. Speak in a careful yet natural manner. Avoid exaggerated lip movements. When giving oral suggestions, keep in mind that the hearing handicapped child may misinterpret instruction.
4. When the child does not understand you, it is better to rephrase a sentence than to repeat it constantly. "Did you do the assignment?" can be changed to "Did you do your homework?"

The Hearing Handicapped Child Gains Information by Reading

5. A simple outline of the lesson on the blackboard provides clues which aid in lipreading.
6. Placing words or phrases on the blackboard as the lesson progresses helps the hearing handicapped pupil follow the lesson more readily.
7. It is helpful for the deaf or hard of hearing pupil to have the assistance of a "buddy," a classmate who is willing to give information and explanations when necessary. The "buddy" should be one who takes good legible notes and is generous about sharing them.
8. Whenever possible indicate the location of related passages in texts or workbooks so that the child may find material he has missed in the class.
9. Written versions of oral tests should be given to these students whenever possible.
10. Assignments should be made in writing.

Services Provided by the Itinerant Teacher of the Hearing Impaired

Weekly small group lessons at designated centers.

Evaluation of educational needs.

Hearing guidance.

Selected children also receive individual supportive instruction in school subjects.

How Classroom Teachers Can Help!

The teacher of the hearing impaired welcomes suggestions from the classroom teacher and is ready to help with problems. Establish communication with the itinerant teacher by giving the child a note when he goes for his lessons. Please notify the itinerant teacher if the child does not wear his hearing aid regularly to class. Establish contact with the parents and other school personnel involved with the child.[25]

Figure 1 provided courtesy of the Board of Education of the City of New York, Bureau for the Hearing Handicapped.

[25]Northcott, *op. cit.*, p. 274.

Chapter 4. ADAPTATIONS IN BUSINESS EDUCATION CURRICULUM

With the inclusion of handicapped individuals in the regular classroom, business teachers are concerned as to what should be taught to whom? Rosenberg,[1] has written:

> Physically handicapped young adults experience the same or perhaps a greater need for recognition, security and self esteem than do nonhandicapped young adults. In addition, they often need guidance in adjusting to their handicap and finding some compensatory satisfaction — such as academic achievement.

In addition, Rosenberg points out that many handicapped students — the blind, deaf, spastic, or those with missing or useless fingers — have difficulty in communicating with others through writing. This may adversely affect their self-concepts which in turn affect motivation and learning. She advocates that "the curriculum for these students physically handicapped should include all courses and the students should feel free to make choices, select activities, and utilize various methods of presentation."[2]

To the fullest possible extent, students need to develop personal and vocational skills. Despite the fact that a college education seems desirable, the development of a vocational skill at the secondary-school level enhances the opportunity for part-time work and provides assurance of a means of providing basic livelihood if the individual's college goals are not met.

Rather than complete revisions of particular curricula, business educators will probably be involved in realistic assessment of program and course content. Do all students need to perform the same exercise? Do all students *have* to master every concept? What should students *understand* even if unable to perform all tasks? What should be *eliminated* for particular students? What need be *added* for other students?

Modification of a curriculum is essential especially if course requirements exclude particular students because of their handicapped condition. Other students may also benefit from such modifications. An example of such modification is contained in the section on secretarial programs.

Planning and the IEPs

Although detailed lesson planning has been advocated for many years, some experienced teachers may have performed this duty in an offhand manner. Phelps[3] stated:

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[1]Claire F. Rosenberg, "Typewriting Methods, Materials, and Curriculum for Handicapped Young Adults," *Readings in Teaching Business Subjects* (Belmont, CA: Fearon Pitman Publishers, Inc., 1980), p. 286.

[2]*Ibid.*, p. 287.

[3]L. Allen Phelps, *Instructional Development for Special Needs Learners — An Inservice Resource Guide* (Normal, IL: The Illinois Network of Exemplary Occupational Education Programs for Handicapped and Disadvantaged Students, n.d.), p. 182.

> Instructional planning involves the developing and sequencing of specific modules or units of instruction. Planning is the step in which the information gathered from the previous activities . . . the learner assessment information . . . the available resources . . . and the job analysis information are all combined to develop an appropriate sequence or series of units that will lead to the attainment of entry employment and independent adult living skills.

Additionally, Phelps stated:

> The crucial components of an instructional module for a special needs learner will include:
>
> 1. Performance objectives which specify the occupational concepts, skills, and competencies to be learned.
> 2. Basic skills/concepts which specify the basic competencies to be developed by the learner *prior to or during* the instruction.
> 3. Basic skill/concepts content which identify the specific basic skills and concepts involved in the task, which can be taught by the special education or basic academic instructional staff.
> 4. Instructional activities which describe the specific experiences the teachers and learners will undertake in both occupational and basic or special instructional situations.
> 5. Instructional resource materials which will be used as part of the instructional activities.
> 6. A checklist system for monitoring student attainment of the performance objectives and basic skills/concepts in the module.

Teaching Skill Subjects

The teaching of skill subjects to the handicapped is important because of the direct relationships to the development of vocational opportunities. The teaching of typewriting in particular is of importance not only for vocational purposes but also as the primary means of written communication for many kinds of handicapped persons. Typewriting is treated separately in a later section of this chapter.

Secretarial/Word Processing Programs

Examination of the secretarial/word processing program in some secondary and postsecondary schools provides the basic curriculum which may be readily adapted to the needs of special students. The traditional secretarial curriculum ordinarily requires typewriting, shorthand, office machines, and office or secretarial procedures.

Many jobs require "no shorthand" or "light shorthand." This fact, coupled with the increased use of word processing equipment to prepare correspondence from machine dictation or rough copy, has caused some business educators to revamp the curriculum so that students may choose between shorthand or machine transcription. In many instances, however, the shorthand students receive machine transcription training but for a shorter period of time.

The foregoing factors have also influenced some educators to believe there is further need for integrating the secretarial/word processing programs. Such integration provides students with career choices based on an assessment of their abilities and interests. Particularly at the secondary level, students should acquire information and develop elementary-level skills in an *area* of office work.

Employees in offices need to have a basic understanding of the whole spectrum of the office. Thus, many of the courses in office education are either offered to students in either the secretarial and word processing programs or the programs have been totally integrated and students elect options within one program. The elimination of shorthand as a requirement in the secretarial program enables the blind and severely visually impaired student to study the secretarial/word processing curriculum.

Suggested Occupational Sequence-Stenographic/Secretarial

The Illinois State Board of Education's "Suggested Guidelines for the Planning of Sequential Programs at the Secondary Level in Business Marketing and Management Occupations" provides an example of a curriculum which can be modified to include deaf and blind students. The suggested stenographic/secretarial curriculum which can also accommodate word processing skills/knowledges is shown. (Figure 2, p. 27.)

An examination of the curriculum indicates that students can complete the sequence by electing to take shorthand, machine shorthand, or machine transcription as the basic transcription skill tool. Any student thus has a choice in the acquisition of basic skill. Several kinds of students can benefit from having alternatives from which to choose — some of these are as follows:

1. Students who have poor coordination in the fine movements required for writing manual shorthand but who perform well on keyboards.
2. Hearing impaired students who can function with special amplifying attachments to transcription equipment, and/or type from hard copy.
3. Visually impaired or totally blind students who can learn from a touch system of shorthand and/or machine transcription.

Figure 2

9th Grade	**Occupational Orientation** Orientation to Business Marketing and Management Occupations
10th Grade	**Occupational Orientation** (Full-year or minimum of two semester courses) Introduction to Data Processing Typing I
11th Grade	**Occupational Orientation** (full-year) Accounting I Office Machines Shorthand I, Machine Shorthand I, or Machine Transcription Typing II
12th Grade	**Occupational Preparation** (full-year) Legal Secretary Medical Secretary Secretarial Occupations Secretarial Office Practice Shorthand II or Machine Shorthand II

In examining the curriculum one finds that students may opt to complete the sequence by electing to take shorthand, machine shorthand or machine transcription. An examination of the specific course descriptions as shown in Figure 3 will show that accommodation has been made so that students having machine transcription, as well as those studying shorthand, may take the senior level secretarial courses.

Furthermore, examination of the course descriptions for the secondary school programs provides insight as to how word processing skills, knowledges and concepts can be introduced into existing classes. For example, in the course description for the secretarial capstone course, Secretarial Office Practice, one finds reference to the introduction of office procedures and techniques which may not have been included in other courses. In addition, reference to the model office areas to be assigned includes the word processing area. Note the areas in bold type in Figure 3, p. 29.

Typewriting

Armless, handless, blind, deaf, spastic, and other handicapped people have learned to typewrite. At the secondary school level, one may or may not be required to teach the keyboard and other fundamentals to any of these individuals. On the other hand, perhaps only part of the essential knowledges have been imparted to them. As a consequence, one needs to examine the skills evidenced by these students very carefully and redesign the content to provide for missing competencies. The key lies in motivating the individual to perform the required practices as well as is possible.

Specialized Equipment

Many years ago a shield to cover the typewriter was devised for students who encounter problems in striking the right key because of trembling. The device has a hole above each key, thus restricting the student's finger to the striking of one key. Heller[5] described a "Rest-O'-Arm" which could be made locally and inexpensively. A music stand may be attached to a desk to provide flexibility and close sight for partially-seeing students. Other severely handicapped students have learned to use objects — held in mouths, between toes — to type. Special tables may be needed by some; chairs and desks may need to be raised or lowered; furniture and equipment may need to be rearranged to accommodate the paraplegic.

Some advocate the use of special attachments to signal the marginal bell to the deaf person. Others recommend using lights to control rhythmic patterns. The blind require no special typewriting equipment.

Typewriting — Content and Methodology

Research studies have proven that typewriting can be a useful tool in developing language arts skills in the elementary schools and that typewriting is beneficial in the acquisition of reading skill. With the current stress on IEPs for

[5]Scot Ober and Jack Heller, "Typing for the Handicapped: Methods and Materials," *Business Education World* (September-October, 1978), p. 3.

Figure 3

Secretarial Occupations

Secretarial occupations is a capstone course designed to assist students to develop into effective business employees by providing them with practical, advanced instruction in school and on the job or in school through office simulation on various office jobs.

If the cooperative approach is used, classwork at school may be largely secretarial with additional work being given to students in individual areas where their performance on the job shows a need for it. Time in class is usually devoted to group and individual study in switchboard operation, the use of the telephone, good grooming, office relationships, accounting, office machines, filing and records management, office techniques, production typing, advanced shorthand and transcription, **transcribing from dictation/transcription equipment,** fundamentals of data processing, and applying for a job. This instruction is also oriented to the development of character traits and basic work relations. For more information concerning the cooperative education method of instruction, refer to publications on cooperative education from the Department of Adult, Vocational and Technical Education.

Classwork at the school is correlated with actual job experience in a business office. Usually half of the school day is spent taking classes and the other half in on-the-job training. The body of subject matter is usually organized into units of instruction to provide opportunities for pupils to prepare for and achieve career objectives in selected occupations.

Using the office simulation approach, classroom instruction includes work experience in a model office. **Assignment areas in the model office may include: reception, secretarial, transcribing, duplicating, word processing, business machines, resource center, filing, payroll, marketing and management, record keeping and taxes, typing pool, or stenography pool.** When a student becomes proficient in the skills of one department, he or she may supervise other students or may be transferred to another department.

Secretarial Office Practice

This is a capstone course designed to prepare secretarial students for immediate employment upon graduation. Emphasis is usually placed on office etiquette, proper business behavior, occupational information, filing, typing, and machine techniques, as well as a review of grammar, punctuation, and business mathematics. **Skills and understandings previously learned may be reviewed, while office procedures and techniques that have not been included in other courses are introduced.** These old and new understandings and skills may be integrated by completing a series of realistic office assignments.

Previous training is usually required in the area of shorthand or in the area of transcription from dictation equipment. Shorthand II may be included as part of the instruction also. Training may also be given in office-style dictation, transcription, letter composition, handling mail, receiving callers, and telephone techniques. Emphasis is placed on developing desirable personality traits and work habits necessary in actual office situations. Classroom instruction may include work experience in a model office. **Assignment areas in the model office include: reception area, clerical pool, duplicating area, secretarial area, transcribing area, typing pool, word processing area, business machines area, resource center, filing area, payroll area, marketing and management area, stenography pool, record keeping area, and tax area.** When a student becomes proficient in the skills of one department, he or she may supervise other students or may be transferred to another department.[1]

[1]Materials taken from the Illinois State Board of Education Guidelines.

special needs students, the need for individualized prescriptive procedures requires that typewriting teachers become more cognizant of and more concerned with the language arts aspects of the typewriting course content.

For the wheelchair bound, the student with missing fingers or hand, the blind, or the deaf, modifications of the course content are relatively minor. The presentation of the keyboard and fundamental knowledges will necessitate accommodation to the needs of particular students.

Integrating Deaf Students. Modifications in the content should probably be made for deaf students. According to Kupsh[6]:

> Typing can be used as a tool for communication; however, since most deaf students have written language problems, they should not be encouraged to think of typing itself as a vocational goal. Deaf students tend to be poor proofreaders and should, therefore, be guided toward statistical typing and machine calculation which require preciseness with numbers rather than the English language.

As a consequence, the hearing impaired student could benefit from doing exercises from a statistical typewriting textbook in lieu of many of the other assignments.

Integrating Students with Missing Hands or Fingers. For students with either hand missing, Richardson[7] advocates a center position for controlling the keyboard which uses the f, g, h, and j keys for home position. She also stated:

> Actual experimentation has proved that keyboard revisions set up to assign a work load to one or two usable digits on an incapacitated hand are not practical. . . . One or two able members of the incapacitated hand can be used more advantageously on the operative parts of the typewriter than on the keyboard.

Heller[8] has divided keyboards to accommodate students who are missing fingers from either or both hand(s). Charts are provided for every combination of missing fingers.

Integrating the Blind Student. Guidelines and suggestions for teaching blind students personal or vocational skill in typewriting and machine transcription were presented by Morton[9]. These guidelines were developed from a study of 40 totally blind transcription typists who were gainfully employed. The identified skills and knowledges used by the transcription typists were observed as the participants performed on the job.

The term blind was defined to mean persons whose visual loss indicates that they can and should function in their environment chiefly through the use of the braille system, audio aids, and special equipment necessary for them to pursue occupations effectively without the use of residual vision.

The guidelines and other suggestions were based on the assumption that the blind student is capable, mentally and physically, of acquiring transcription

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[6]Joyce Kupsh, "Working With Hearing-Impaired Students," *Journal of Business Education*, Vol. 52 (December, 1976), pp. 114-16.

[7]Nina K. Richardson, *Type with One Hand* (Cincinnati: South-Western Publishing Co., 1959), pp. iii, 1.

[8]Jack Heller, *Typing for the Physically Handicapped: Methods and Keyboard Presentation Charts* (New York: Gregg-McGraw-Hill, 1978).

[9]Margaret A. Morton, "Vocational Education Needs of Blind Machine Transcribers," (Doctoral dissertation, The University of North Dakota, Grand Forks, ND, May, 1972), pp. 126-146.

skills. The guidelines and suggestions were based on the following tasks and knowledges found to be necessary in the functioning of one or more of the transcription typists.

The types of dictation materials transcribed included the following: medical reports, memorandums, letters and envelopes, columnar materials, social case narratives, business reports, dialogues or interviews, minutes of meetings, and organizational charts.

Printed forms were typed by 29 employees; 17 used letterhead paper and envelopes. Forms containing ruled lines were typed by 16 employees; 14 typed on forms with fill-in areas. One transcription typist had mastered lined forms with boxes.

Skills needed by some of the typists included checking machine adjustment, correcting errors with tape and/or liquid, collating and decollating forms, centering and underscoring, tabulating, editing dictation, photocopying, using magnetic media typewriters, filing, typing stencils, answering telephones and recording messages, acting as receptionists, operating switchboards, and training new employees.

Guideline 1. The blindness of a student should not be minimized or emphasized — it is a fact about the student which must be accepted as are individual characteristics of other students. An awareness of when the student can and should be independent is essential. Blind students must be encouraged to think and act independently insofar as possible. However, students cannot ignore their need for help in instruction or in the accomplishment of some tasks which require sight as a testing device. Therefore, part of the training — from beginning to end — must be the building of the realization that there is a proper time, person, and place for seeking help.

Directions to the blind student must be more explicit and descriptive than those given ordinarily. Tangible devices can be constructed to exemplify that which to those without sight remains abstract. For example, forms can illustrate the concept of tabulation as the student can feel the space between words in various columns, visualize a column, and read the context of the form. A copy of typewriting can also be prepared by pasting strips of cardboard on paper to represent the words in columns. The form closely resembles the size of the finished product. Through explanation, and touch, the blind student can be helped to mentally visualize spacing in relation to tabulation, backspacing, horizontal, and vertical placement. In addition, learning will be more meaningful for the student who understands both content and form of that which is to be typed.

Unless there is a definite reason for not expecting the same standards as from sighted students, the blind student should be encouraged to perform on the same level and compete on the same grading scale as sighted students. An example of one instance in which it is not possible for a blind student to complete a task in the same amount of time as others is in the setting of margins. The counting of strokes and verifying the correctness of the line length necessarily make this a slower process.

Guideline 2. Typewriting instruction provided blind students in the elementary level of typewriting should include correct fingering techniques for the keyboard and a thorough knowledge of service mechanisms. In addition to learning the correct fingering on the alphabetic and numeric keys, the blind student must be helped to develop correct habits for use of the following:

backspacer, carriage return, repeat key, margin release, tab bar or key, tab clear and set keys, paper release, paper bail, tension adjustment controls, and the linespace control lever.

Students in the elementary stages of typewriting should become familiar with one way to (1) check straightness of paper insertion, (2) set margins, (3) correct errors, and (4) estimate the stopping point on a page.

Freedom of hand action should be encouraged in the early stages of typewriting so that students will become used to exploring and discovering various parts of the typewriter. As the keyboard and other parts of the typewriter are introduced, the student should feel these in relation to the whole typewriter.

Estimating the point at which no more should be typed on a page will vary, naturally, with the physical features of the typewriter used by the blind student. However, a definite mark seems more desirable than dependence upon position of the paper in relation to the platen. The problem in estimating the amount of paper in relation to the platen arises when students do not check frequently, and when doing so, find that paper has entirely disappeared behind the platen. The question then becomes, "How much paper is behind the platen?" and a definite stopping point remains undetermined. The teacher should explore the backside of the typewriter with the student to determine whether there is a separation in the chassis, a brand name or trademark, a cord, or a ventilator grill. Then, the student should establish an appropriate point of reference. If no identifying points can be located, a small piece of tape can be positioned so that when the paper reaches the tape, the student knows exactly how many more lines can be typed without violating typewriting style.

The setting of margins should include the actual determination of the point of setting margins and the verification of the line length between the left and right margin. If the paper guide is positioned at the extreme left side of the typewriter, a sighted person must determine the number spaces between the edge of the paper and the point where a key will strike the page. For example, on some typewriters there are 15 spaces between the left edge of the paper and the point where a letter can be printed. Thus, the student would start counting from 15 when spacing forward to set the left margin.

Paper insertion for blind students should be taught in the same manner as it is taught to sighted students. However, blind students should be taught to determine whether or not the paper was inserted into the machine straight. If typewriters are used that have raised markings that can be felt for location of the paper guide, the student should be taught to place the paper guide at zero. Otherwise, the student should place the paper guide at the extreme left position.

Students should be taught to *correct errors* with correction tape. (No transcription typists were found using erasers.) The number of times that a key must be struck, when using correction paper and when striking the proper key, will depend upon the quality of the correction paper and the typewriter paper which are being used.

Guideline 3. *Personal organization skills* should be developed through the coordinated efforts of the teacher and the student. Blind students should be encouraged and trained to organize thoughts, speech, learning materials, and supplies. As the memory load for course work could make learning seem an impossible task, the blind student must be made aware of the benefits to be gained from organizational structures: making fewer trips to gather forgotten materials and supplies; taking notes that are concise and clearly stated; and

communicating with greater understanding. The retention of knowledge should be easier because of the analysis and restatement processes.

The blind student should be encouraged and trained to organize thoughts and materials in the following ways: (1) The instructions to students must be clearly, concisely, and completely stated in logical order. (2) The supplies or other transcription materials should be positioned in the same place and/or marked with braille until placement patterns are memorized. (3) The student should be aided in the development of routines for the following: checking machine adjustments, checking paper insertion, setting margins, brailling information, and remembering the point of interruption.

When special instructions for typewriting are given, the following pattern should be used. (1) The teacher should orally read or state instructions. (2) The student should, in concise form, restate the directions. (3) The student should make a braille copy of the instructions for future reference. If the student was unable to restate the directions in concise form, further clarification is required through student/teacher discussion of the procedure until the student is able to state and write brief, comprehensive directions in his or her own verbal style.

In addition, the teacher should analyze the directions to determine the proper placement of items on the brailled instructions. For example, the description of a form on which the date and complimentary close are to be typed at the same horizontal position may give placement information in vertical order. However, a notation made that a tab for the complimentary closing should be set at the point where the date begins should not be made in the same order as information may have been presented. The notation should be made at the point where instructions were given as to the placement of the date.

Students should be taught to place each type of paper supply in a particular section of partitioned office-type desk drawers. If the classroom is not equipped with office-type desks, the student should be provided a desk tray with five or six compartments. The student should learn to place paper in the tray compartments in a manner similar to the placement of supplies within a desk. Ordinarily the top of the paper should be placed in a position so that when one sheet is removed, it is ready for insertion into the typewriter, i.e., the letterhead is at the bottom, faced away from the student.

Materials for correcting errors should be stored in an easily accessible part of the drawer or tray. Students should develop a habit of placing the correction tape face down at the edge of the typewriter, or if plastic attachments for tape storage may be used on school equipment, these should be placed on the front of the typewriter.

Guideline 4. In traditional school programs, the acquisition of vocational competence for initial employment as a *machine transcriber* will require approximately two years of instruction for blind students. This would be supplementary to the typewriting training previously received as a basis for written communications.

Students who were taught typewriting primarily as a tool of communication should be enrolled in a one-year elementary-level typewriting course in either the ninth or tenth grades unless the following basic skills have been acquired: setting margins; setting and clearing tabulator stops; straightening paper; determining the stopping point on a page; typing business letters of different styles; typing simple tabulation problems; typing manuscripts, reports, and business forms; and centering materials to be typed.

Students who have previously developed vocational typewriting competencies should be examined for typewriting proficiency before enrollment in a two-year vocational office education curriculum at the eleventh and twelfth grade levels of secondary school or a two-year stenographic curriculum at the postsecondary level. The blind student should also be tested for proficiencies in language arts, spelling, and knowledge of the business communications usually learned in the elementary typewriting course.

If deficiencies are noted, it may be advisable for the student to enroll in a beginning typewriting course to increase his or her knowledge of background information. Students who lack knowledge and skills usually incorporated into the subject matter of typewriting, but who can type rapidly and accurately, should omit the period during which the keyboard is introduced in typewriting classes and perform remedial tasks in other areas of deficiency.

Guideline 5. Typewriting instruction at the vocational level of skill development should refine skills previously learned and provide opportunities for learning the following: estimating margin stops; estimating the stopping point on a page; typing of printed and lined forms; typing multiple carbon copies; figuring tabulation problems; using the variable line spacer; typing from voice-writing equipment; typing duplicator masters or stencils; cleaning the typewriter, changing ribbons; and typing from direct dictation.

Tabulation problems should be taught utilizing the arithmetic method. A habit of recording the spaces which must be counted from the left margin to set necessary tab stops for forms that may be typed in offices should be established. In addition, a braille copy of the problem should be provided. If materials are recorded on tape or dictated by the teacher, the blind student must listen to the entire problem and attempt to determine the longest items within columns. Therefore, except to gain acquaintance with the process of figuring tabulations from taped material, students should not have to solve complex tabulation problems. The probability of typing these in the office situation is reduced because of the length of time required for the listening and problem-solving process.

For students who apparently have not grasped the concept of columnar materials, a braillon facsimile of the problem should be prepared for visualization purposes. For example, one may cut pieces of cardboard to represent columns. These are pasted in position on a sheet of standard-size typewriting paper. Through a heat process, multiple copies of this can be made for use by more than one student. These copies are ordinarily reproduced by agencies providing special services for the blind. If only one student is to be served, the original sheet with the cardboard pieces is sufficient. This type of pasteup is also useful for teaching margins and letter parts as well as different letter styles.

Estimating margins can be accomplished in different ways that are basically dependent upon the typewriter. If visible, hand-set margin setting devices are used, the student can estimate placement of the margin set by placing the fist against the edge of the line-space indicator and then moving the margin stop so that it touches the fist.

The point-of-print indicator on some typewriters is spaced so that it is $1\frac{1}{2}$ inches from the lower edge of the cardholder. Thus, if the paper guide is at zero, the margins may be set at the printing point after moving the edges of the cardholder to the edge of the paper.

Blind students can be taught to estimate the approximate stopping point on a page by repeatedly feeling the amount of paper above the paper bail until a sense of distance is acquired. This consumes less time than reaching to the back of the typewriter each time the transcriber needs to check.

Learning to *type lines* or *fill-in forms* requires the assistance of a sighted person. Specific information about vertical or horizontal placement of the lines or fill-in areas, as well as the subject matter to be placed at particular points, must be noted. The form to be typed must be analyzed and explained line by line so that braille directions may be recorded. Starting at the top of the form, the exact number of spaces down to the first line of typewriting should be counted. Additional information to be brailled will include what is to be typed on each line, whether alignment with a ruling or heading is required and whether any tab stops are necessary. If tabulations are necessary, the number of the line should be noted and the exact number of spaces from the left edge of the paper for each tab stop must be brailled.

Blind students can be taught to use the *variable linespacer* for judging distance in the same manner as sighted students. Prior to using the variable linespacer for typing on lined forms, the use of the variable spacer for superscripts should be taught and the use of superscripts should be explained to the student.

Blind students should be encouraged to *feel the typewriting impressions* on stationery to determine: the position on line; the need for a new sheet of carbon paper; the exactness of underscoring; and the appropriate setting for the impression control.

A routine should be established for remembering what had been typed when an interruption occurs. Individual preference will determine whether the student stops at the end of a word, completes a sentence, spaces after the word, or stops typing before adding a space at the end of the last word typed.

Guideline 6. The vocational office education curriculum of the blind student machine transcriber should parallel the basic pattern provided the sighted student when preparing for the acquisition of suitable employment and when acquiring the foundation for advancement. The following topics, as course units or courses, should be common to the training of both blind and sighted students:

1. Interpersonal relationships: personal qualities, human relations, receiving callers, and office etiquette.
2. Employment opportunities — seeking, acquiring, and retaining a position; adjustment to the job; and finding opportunity for advancement.
3. Business organizations — principles of office organization, structures of business organization, and activities of the office.
4. Communication skills — telephone and telegraph, letter and report writing, scheduling appointments, proofreading and verifying information, transcribing, giving and taking instructions, and record keeping.
5. Office machines — copying, offset duplicating, 10-key adding machines, electronic desk calculators, and voice-writing equipment.
6. Filing — storage and protection, transfer, disposal, records retention schedules, and systems of filing.
7. Reference sources — library services, books, and special agencies.

Guideline 7. Blind students should have a special unit of instruction *introducing machine transcription.* The teacher should thoroughly explain and demonstrate the machine transcription process in addition to guiding the student's exploration of the voice-writing equipment.

The material contained on the belt to be transcribed by the blind student should be read aloud to the student to provide opportunity for discussion of unfamiliar elements of the typewriting procedure or of the vocabulary contained in the communication. Arrangements should be made to provide the introduction to machine transcription when there is opportunity for uninterrupted periods of time.

The teacher or teacher's aide can help the student in the following ways:

1. Read each sentence to the student.
2. Determine whether the student understands words that may be unfamiliar.
3. Ask the student to spell aloud words frequently misspelled or which were unfamiliar to him or her.
4. Help the student to braille correct spellings and definitions of words that occur frequently and with which he or she was unfamiliar.
5. Discuss the placement and style of the communication.
6. Guide the student in preparing braille directions for typing special styles or on particular forms.
7. Explain how to preview a belt for the following purposes: to determine length of items contained on the belt; to note corrections or changes to be made; and to clarify poorly enunciated dictation.
8. Direct the student to preview the belt once before typing the communications recorded on it.

To mark indicator slips for the use of blind students, a hole may be punched with a pen, letter opener, or a similar object at the point of correction or length indication so that rough edges of the hole can be felt easily.

Guideline 8. The vocational education of blind transcriptionists should include continuous learning of the following language arts skills until proficiency has been developed: *spelling, punctuation, grammar, syllabication, and word selection.* Previewing subject matter and reviewing the transcribed materials of blind students will provide constant exposure to language arts skills.

Guideline 9. Business education teachers should solicit the cooperation of other teachers in developing the skills which form the basis of transcription: typewriting, listening, language arts, organization, and problem-solving. Through cooperative efforts by teachers of different subjects, vocabulary development, correct spelling, and fundamental skill in English usage can be correlated with typewriting skills. Specifically, the terminology peculiar to a given subject can provide subject matter for the teachers of reading, spelling, and typewriting. As written assignments are typed by blind students, teachers of other subject areas can require correct spelling, word usage, grammatical construction, and accuracy of typewriting from blind students.

Guideline 10. Students should acquire listening skills for the following purposes: to aid in fuller comprehension of the spoken word, to develop the ability to discern correct usage and word selection, to acquire skill in estimating lengths of communications to be transcribed, to develop the ability to distinguish between homonyms, and to enlarge their vocabularies. Special belts should be dictated for the following purposes: to determine whether students understand

the vocabulary used, to prepare students to listen to poorly enunciated dictation, and to ascertain students' proficiency in word selection.

Guideline 11. Blind students, especially, should be observed to ascertain whether additional training or counseling is essential in any of the following areas: mobility; social habits, especially eating habits; personal grooming habits; selection of suitable clothing styles; social orientation; and scriptwriting, at least the ability to mark with a pen or pencil.

If deficiencies are noted, the business teacher should inform guidance counselors or resource personnel of the specific problems. If other personnel are not available for consultation and remedial direction, the business teacher should attempt to help the student. Mobility skills can be strengthened in the classroom if the student is required to move about the room rather than remain seated at a desk waiting for another student or the teacher to bring necessary material to him or her.

Social orientation of shy students should be encouraged by arranging a variety of contacts in the lunchroom and at business club functions. Personal counseling by the teacher, in addition to classroom discussions of grooming and fashions, may be effective.

Guideline 12. Students should be made aware of the fact that on-the-job training periods will vary in accordance with the adaptive skill of the trainee, the technical nature of the vocabulary, and the provision for in-service training of employees by the employing institution. Blind students who lack adaptive ability or who are deficient in any of the areas of transcription skill should be counseled to attend a postsecondary institution for further training.

Guideline 13. Vocational guidance must be based on a realistic assessment of the physical and personality traits of the individual in addition to the capabilities of the blind student as a skilled transcriptionist.

In *word processing courses* which provide keyboarding activities on text-editing equipment, the blind student should be encouraged to master keying skills. Blind persons have used magnetic media keyboards for a number of years. Special formatting instructions can be used for equipment with CRTs since no paper can be "measured" for determining the point of stoppage. Some equipment has been programmed so that the bell rings to indicate the bottom margin. Setting margins, tabular stops, etc., may also require special formatting or the assistance of a sighted person.

An audio typing unit has been developed for use with the IBM Memory typewriter and the Mag Card II. This device enables the blind student to hear detailed instructions for operating the equipment as well as to obtain voice feedback. This feedback may be by character or word. In addition, punctuation marks are "voiced." The voice sounds are comparable to those of the talking calculators.

Integrating the Mildly Mentally Handicapped Student

Although these students will probably not depend upon typewriting as a vocational tool, they will benefit from typewriting instruction. They may also benefit from studying machine transcription because of the additional training on language arts skills.

Teachers have reported that some of the techniques advocated for integrating the blind student have worked well for the mildly mentally

handicapped student. For example, the involvement of the touch sense is beneficial when raised forms are prepared to illustrate placement of columns, letter styles, etc. Too, going through the material to be transcribed to find words not in the student's vocabulary is beneficial. The slower student, too, also needs concrete, explicit directions.

Basic Business Subjects

Basic business courses are ordinarily included as part of one or more of the specialized curricula. However, these important courses need to be discussed inasmuch as the content knowledge and skills are essential to anyone living in today's society. These are courses which should benefit *all* high school students, not only those planning to specialize in a particular aspect of business education. Special needs students, if they are truly to live in the mainstream of life, especially need the benefit of business teachers in these courses.

Basic business courses that may prove beneficial to the handicapped person are: consumer education, business law, introduction to business, business arithmetic, general business, money management, family financial management, and record keeping. Of course, adaptations of current basic business subject areas must be made to make the curriculum acceptable to the IEP of the handicapped learner.

With counseling and guidance from special educators, resource persons, and the students' input as to how they can function in various activities, much meaningful knowledge about basic business can be learned by the large majority of students. Methodology will need to vary to fit the needs of individual students.

In general, teachers of students with visual handicaps, lower mental abilities, economic and/or cultural disadvantages, and some types of emotional problems will ordinarily find that there is a need to be more explicit, to use more concrete terms, to explain terms more precisely, etc., and to prepare basically an auditory presentation. On the other hand, for the hearing-impaired or deaf child, visual aids or presentations are desirable supplements to lip reading and interpreters.

Business educators will probably find that deaf students may need basic business materials geared to lower levels of reading ability than those for the normal student. In 1975, Jesema[10] analyzed the scores of 6,873 hearing-impaired students, ages 6 to 19, who were attending special education programs. These scores indicated that 14-year-olds read at the third-grade level in reading comprehension; 10-year-old deaf children tested at third-grade level in arithmetic computation.

In a three-year study of progress in reading and arithmetic, Trybus and Karchmer[11] found that hearing-impaired students, ". . . progressed at approximately one-third of a year on the average for age group in reading." Kirk[12] stated:

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[10]C. Jesema, *The Relationship Between Academic Achievement and the Demographic Characteristics of Hearing Impaired Children and Youth*, (Gallaudet College Office of Demographic Studies) (Washington, D.C.: Gallaudet College), pp. 1-15.

[11]R. J. Trybus and M. A. Karchmer, "School Achievement Scores of Hearing Impaired Children: National Data on Achievement Status and Growth Patterns," *American Annals of the Deaf*, Vol. 115 (September, 1977), pp. 527-536.

[12]Samuel A. Kirk and James J. Gallagher, *Educating Exceptional Children* (Boston: Houghton Mifflin Company, 1979).

> . . . The majority of deaf children are educationally retarded, with most not exceeding the fourth and fifth grades by the time they reach adulthood. Approximately 10 percent, however, have been able to achieve in academic subjects, including reading at the level of the average hearing child.

Awareness of the fact that the hearing-impaired students may have vocabulary comprehension difficulties should help the basic business teacher in the selection of appropriate materials. In Chapter 2, the authors explained that lip-reading ability does not enable one to differentiate between certain sounds. Therefore, you should not assume that everything will be satisfactory because the student is placed in a position to read lips.

A few blind individuals can learn to read print through the use of an Optacon. This equipment is a device which enables the student to feel vibrations representing printed letters. Thus, the student is able to read printed materials. However, only a small majority of the visually-handicapped possess the essential intellectual capacity, high motivation, and perseverance necessary to develop skill in the use of the Optacon. The training period is lengthy for mastery of reading comprehension skill. Speeds of approximately 50 to 70 words per minute can be attained. Kirk[13] cited other technological improvements which are being developed and upgraded such as a computer automaton which is being developed to translate ink print into Grade 2 Braille. The MIT Braille Emboss is used with a telewriter to provide Braille materials. The request is phoned into a computer center and the material is returned in Braille. Speech compression can double the word rate while retaining vocal pitch and quality. The comprehension rate of recorded speeds of 275 words per minute is comparable to reading print. Kirk[14] recommends speeds of 194 to 232 words per minute for the best comprehension of tape recording. Materials dictated too slowly or too rapidly are more difficult to comprehend.

In reading Braille, speeds are usually only about 25 percent of those attained by those reading regular print. Therefore, time becomes a very important consideration in planning classroom activities and homework assignments in basic business subjects. Other helpful devices in teaching visually-handicapped students are an abacus or modified abacus, termed an arithmetic board, and a talking calculator.

Planning Instructions

Business teachers who have already become experienced in developing individualized learning units and/or using competency-based evaluation should have little difficulty in the preparation of IEPs. The adjustment to teaching students with varying capabilities involves thorough analysis of content and learning tasks. For many years, business teachers have had to adjust content, materials, and methods to help individuals who ranged widely in mental abilities. Now an adjustment is necessary to determine which competencies in a given course can be mastered by a student who is handicapped in a specific way.

The following questions may be asked when planning for a specific course:

1. What knowledge/skills should every student have at the end of this course?

[13] *Ibid.*, p. 270.
[14] *Ibid.*, p. 248.

2. What knowledge/skills are desirable for all, for some?
3. How do I evaluate the student's mastery of the content/skill?
4. What methods should I employ to teach specific knowledge/skills?
5. What materials are necessary for the students to make learning easier?
6. What materials must be obtained at differing reading levels in order to teach the students who ordinarily are enrolled?
7. What materials need to be obtained in a different media?
8. What learning tasks should be performed by students in order to master the various competencies?

After answering these questions, competencies (performance objectives) should be organized which are based on the selected learning tasks. The instructor should evaluate each segment carefully in relation to what can be reasonably expected from a student possessing a particular type of handicap. The individual may be able to do more or to do less than that expected, however, a decision must be made in order to develop the plan of instruction. Once the learning tasks have been designated, these should be reviewed to determine whether any are ones which cannot be performed by a student with a particular handicap.

If there are learning tasks which cannot be performed successfully, the teacher needs to ask what alternative tasks can be substituted or what modifications to the learning task may be made. It may be that students can perform part of the task or may be able to complete the assignment in a different way. Often, the handicapped student can suggest ways in which the assignments can be handled differently. One also needs to ask whether or not the task can be eliminated for the student without endangering future learning? Another area for thought is that of imparting knowledge about tasks which cannot be performed in the course of study. For example, few blind children will actually perform manual bookkeeping routines, however, a knowledge of the fundamentals of accounting may be of value.

The teaching of handicapped students can be a stimulating challenge to the teacher who is willing to modify course content, methods, evaluation techniques, and materials.

CHAPTER 5. IMPLICATIONS FOR BUSINESS TEACHER EDUCATION

At present, the regular classroom teacher is not expected to become an expert in teaching every type of handicapped student. As Hopeman[1] stated, "Although P.L. 94-142 recognized the need for inservice training, it is naive to expect each public school teacher to be adequately trained to effectively teach children in each area of special education." However, with the inclusion of a wide range of handicapped students in regular classrooms, business teachers will need to be more knowledgeable about what can be realistically achieved by those who will enroll in business courses.

Labeling, as previously noted, has been found to have advantages and disadvantages. However, labels provide a basis for disseminating general knowledge — even if students will not be labeled within the classroom — which will aid business teachers as long as they remember that each individual is unique. Many years ago, Jernigan[2] wrote that the only characteristic blind persons had in common was the lack of a sense of sight. However, as noted in Chapter 3, many common problems are shared by the handicapped in general; other common problems are shared by various groups.

Teachers in the Field

Regardless of whether courses in psychology and methodology of teaching students with special needs will be mandated for employed teachers, those who are presently teaching handicapped students should benefit from study of special psychology and methods courses. However, many teachers are employed in areas where no opportunity for formal classroom instruction in a collegiate institution exists. Even those who do reside in a locality where postsecondary education is available may find that curricular and extracurricular activities as well as day-to-day living requirements preclude enrollment in courses. Therefore, in the short run, inservice education for teachers involved in the development of IEPs and the instruction of handicapped students is essential. However, for teachers in communities large enough that teaching handicapped students is not a once-in-a-lifetime situation, formal education would be most beneficial.

Collegiate business education faculty members, too, will need preparation not only in teaching handicapped students, but also in modifying existing business teacher education programs. They may also be responsible for including the techniques for teaching handicapped students in various methods classes.

There are two categories of inservice training that need to be discussed for realistic development of Individualized Education Plans. The business education teacher needs the expertise of the special education faculty; the special education teachers probably need the expertise of the business faculty. Only in this way can the student benefit from shared knowledge. Unfortunately, in the initial stages of the implementation of P.L. 94-142, neither the special education teacher nor the business teacher always knew certain basic facts about some types of handicapped students and their needs. For example, there was a situation in

[1]Lawrence Hopeman, "Reservations About the Effects of P.L. 94-142 on the Education of Visually Handicapped Children," *Education of the Visually Handicapped*, No. 2 (Summer, 1977), p. 34.

[2]Kenneth Jernigan, "When a Blind Man Applies for a Job . . .," *Personnel: AMS Professional Management Bulletin* (February, 1968), p. 17.

which a blind student enrolled in typewriting. Well-intentioned teachers ordered a braille typewriting textbook since the student had learned to type but was deficient in many of the aspects essential for successful use of the typewriter for correct communication. Near the end of the course, the student was queried about the fact that the braille copy of the typewriting text, which had been ordered, had not arrived. His reaction? "It would have been worthless." Wasted effort, wasted money. Dictated lessons on cassettes would have provided more meaningful instruction and could have been done at the school.

Inservice Training

The inservice training for business teachers in the early stages needs to be directed specifically toward the handicapped students enrolled or expected to enroll in business classes within the foreseeable future. The following knowledges should be included in such training:

1. The usual physical limitations of the students.
2. The usual intellectual limitations of the students.
3. The deficiencies of students with particular handicaps, regardless of their intelligence levels.
4. The resource persons and resource services available.
5. The psychology of educating the exceptional students.
6. The content modifications that may be necessary.
7. The preferred method of teaching various handicapped students.
8. The special aids available for special students.
9. The vocational skill(s) with which the handicapped students can be prepared at the secondary school level — or postsecondary levels.
10. The assessment techniques and tools used by special educators.

The DACUM Panel[3] prepared a competency profile listing 86 statements under the following categories:

A. Develop a positive attitude toward working with sensory and physically impaired in the regular program.
B. Implement modifications in the physical setting.
C. Modify curriculum and instructions.
D. Participate in ongoing evaluation concerning sensory and physically impaired.
E. Develop effective communications.
F. Identify and utilize supportive services (on campus and in the community).
G. Provide aid in emergencies.
H. Continue professional growth. (See Appendix C.)

According to Sitlington, the majority of secondary vocational education programs for the handicapped have ordinarily lacked provision for the systematic collection of data for assessment of the student. Now, because of P.L. 94-142, the involvement of regular educators in such programs is mandatory. Furthermore, Sitlington[4] stated that even though:

[3]The DACUM Panel developed this profile at a May, 1979, meeting at the National Center for Research in Vocational Education, The Ohio State University, Columbus.

[4]Patricia L. Sitlington, "Vocational Assessment and Training of the Handicapped," *Focus on Exceptional Children*, Vol. 12, No. 4 (December, 1979), pp. 1, 2, 8.

> . . . the work experience coordinator may still be involved in vocational programming for the handicapped in his or her high school, the regular vocational educator and counseling staff must also be involved, and the handicapped student should be included in the regular vocational education cooperative education programs. . . . Because of the increased involvement of regular education staff and because of the systematic planning now required in vocational programs for the handicapped, vocational assessment becomes more important. . . . The assessment component must be custom fit to the other segments of a vocational program, and the information flow must be continual between these segments and the assessment sequence.

Solomon[5], in describing his school's prototype program for large-scale mainstreaming of the handicapped stated:

> The regular teachers were fearful. Some were repelled. Some were anxious because of feelings of inadequacy. Some provided generous doses of pity but little understanding or acceptance. Some special education teachers felt that their domain was being threatened and they alone knew how to teach their wards. There was suspicion and some hostility. It ended with the full experience of sharing.

Thus, a different facet of inservice education may lie in the direction of shared-knowledge seminars in which business teachers and special education teachers explore each others' areas of expertise. As stated before, business teachers are undoubtedly in need of help in teaching handicapped students; the special education personnel are probably in need of insight for prevocational and vocational counseling — for example, to gain understanding of the following:

1. The skills and abilities necessary for students' work experience and job opportunities in business.
2. The special resource materials needed by the business teacher and/or the student.
3. The kinds of communication channels needed during the school year.
4. The grade levels and methodology essential to teaching typewriting as a language arts skill to handicapped children.
5. The general business concepts basic to economic well-being which need to be stressed in presecondary school classes.

The foregoing suggestions for communication between business and special education faculty are not meant to be all-inclusive. The backgrounds of the individuals will more appropriately determine the extent of this information exchange. However, one must recognize the importance of full and complete cooperation between the two areas.

Another aspect of formal education related to business was presented by Westling and Schwartz.[6]

> The special education work-study coordinator (WSC), a relatively new person on the special education team, plays a vital role in aiding the mentally retarded adolescent reach his vocational goals. . . . In addition to the curriculum content now offered by teacher-training institutions, supplementary areas of education for WSC trainees would be beneficial.

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[5]Edward O. Solomon, "New York City's Prototype School for Educating the Handicapped, *Phi Delta Kappan* (September, 1977), pp. 8-9.

[6]David L. Westling and Stuart E. Schwartz, "Some Considerations for Training Work-Study Coordinators," *Educational Horizons*, Vol 56, No. 3 (Spring, 1978), pp. 144-45.

These areas include business administration (management), vocational education, and public relations.

In addition, Westling and Schwartz mentioned that the WSC might have to provide special instruction at the work site or in the school setting. Thus, "Courses such as Managerial Planning, Production Management Problems, Business Law, Business Finance, Principles of Management and Marketing . . . may improve the WSC's efforts within two domains."[7] The two domains would be those of providing training to the student and of developing positive relationships with the business community.

Off- and On-Campus Offerings

As the current emphasis is on generic training rather than for concentration on teaching one specific disability, institutions are currently devising course offerings and master's degree programs to meet the needs of regular classroom teachers. At present, those described in the literature have been degrees primarily in special education designed for regular classroom teachers from a variety of disciplines.

An interdisciplinary approach would seem desirable and more appropriate in many ways, especially for secondary school teachers. In this way, the specific techniques, aids, materials, and knowledges useful for modifying courses and for teaching the handicapped would be most beneficial. Specific applications of knowledge to courses taught are necessary to help teachers by reducing the tremendous amount of time that might otherwise have to be spent on each of the courses they are teaching. This would be especially beneficial in programs planned and implemented by faculty from special education and the other disciplines. However, interdisciplinary degree programs are difficult to administer and staff.

Teachers in the field often wonder why it is not possible to acquire courses that they feel are needed. In some state educational institutions, the mechanics for implementing new programs require up to three years; for implementing new courses, at least one year. If the programs and/or courses are essential for certification purposes, additional time is required for approval by state agencies.

New Business Teacher Preparation

As previously mentioned, certification requirements in many states have been or are now being changed to include specific course content pertinent to teaching special students. Requirements vary, however, most are concerned with presenting new teachers with information and understanding of the handicapping conditions, psychological principles for instruction, appropriate methodology, and suitable materials. This is in addition to the requisite knowledge and skills for teaching business education subjects.

Lengthened Programs

Once again questions are being asked whether the time has arrived that undergraduate business teacher preparation time should be lengthened. Over a decade ago, Binion[8] wrote of the future education for the new business teacher in

[7] *Ibid.*

[8] John E. Binion, "Projections for the Future," *Business Education — An Evaluative Inventory*, National Business Education Association Yearbook, No. 6, 1968, p. 373.

relation to the AACSB requirements. Based on an assumed requirement of 130 semester hours which included physical education, he stated, ". . . the student will be pressed to get in his required and necessary business courses and still qualify to get a teaching certificate."

This problem is now compounded in some educational institutions by the increased state requirements in clinical experiences and in special education/business education courses. Other institutions are faced with the addition of increased general education requirements felt essential to combat the lowered levels of achievement by many college students in relation to basic skills and cultural deficiencies.

At the 1974 NABTE Convention in Chicago, Binion[9] presented a proposal — later published in the NABTE Review — which outlined a six-year program for business educators of the future. An externship period, internship period, and a residency period were concepts for activities not ordinarily included in degree programs. The externship period would involve Youth Experience — part-time supervised work with youth organizations; Field experience — observation of and participation in schools; and, Student Teaching — preferably in the school in which the student acquired field experience. At this point in the sequence, the student would be eligible for graduation and preliminary certification as shown on Figure 4, p. 46.

Thomas and others[10] presented four different models for business teacher preparation varying from a simple modification of the present traditional program to a six-year program based on Binion's proposed six-year program. These models were devised for the purpose of including *special education* knowledges and skills in the entire undergraduate and master's levels of business teacher education. Figure 5 shows their version of Binion's Model. (See p. 47.)

That the first externship involves the student in activities with handicapped youngsters in a variety of settings was also recommended by Thomas, et. al. In the field experience activity, students should have the opportunity to work on a one-to-one basis with handicapped youngsters by providing tutorial assistance, and to help teachers provide remedial work, to supervise laboratories, and to perform other similar activities. "The student teaching experience is like that of other models. The student teachers are placed primarily in 'mainstreamed' business education classrooms, with some time spent in special education classes and in 'mainstreamed' nonbusiness classes."[11]

Content Knowledge and Skills

Regardless of the specific psychology and methods courses which are required for certification, the student should be provided direct contact with handicapped students. In the clinical experiences segment of the program, a variety of learning experiences can provide knowledge about materials, methods, and psychological principles involved in teaching students with special needs.

Specifically, students should have the opportunity to:

1. Visit materials centers.

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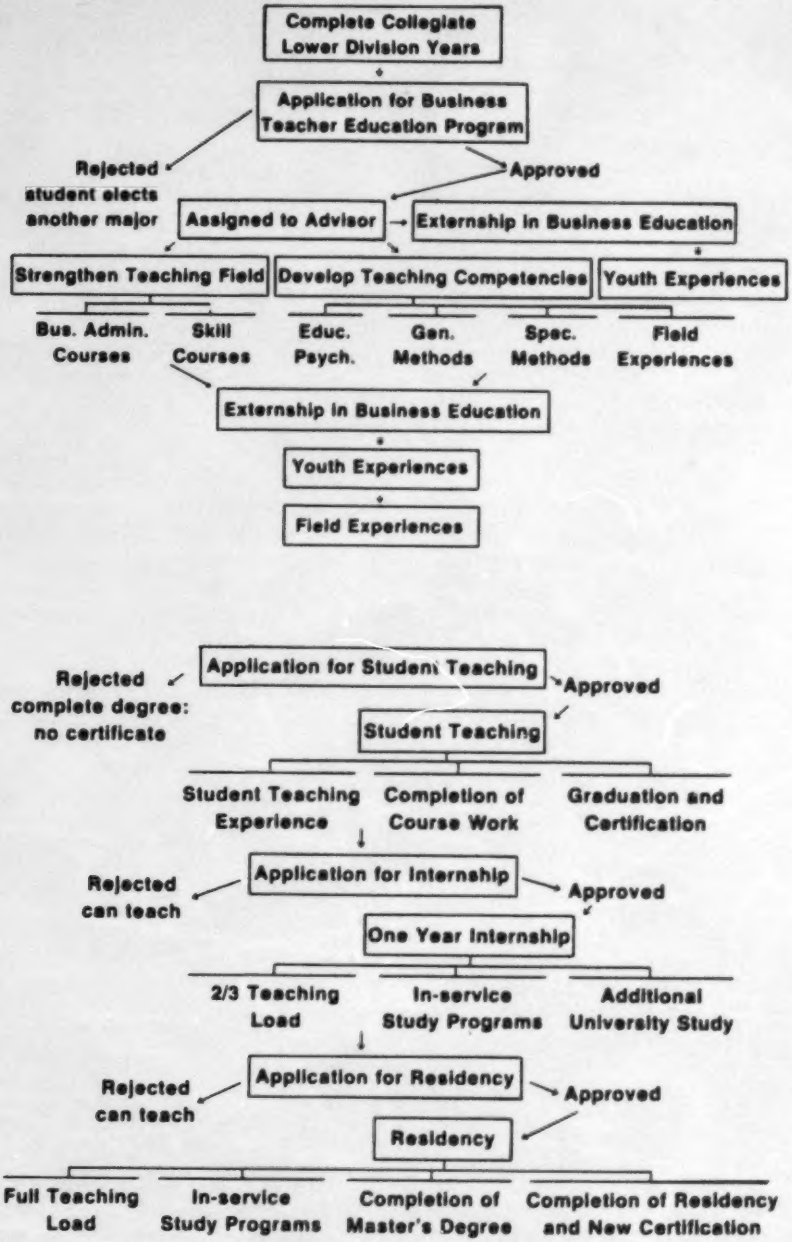
[9]John E. Binion, "There Is a Way to Do It Better — Find It," *NABTE Review* (Reston, VA: National Business Teacher Education Association, 1975), pp. 85-92.

[10]Edward G. Thomas, Kenneth R. Mayer, and Bella G. Clinksdale, "Implications of Public Law 94-142 for Business Teacher Education," *NABTE Review* (Reston, VA: National Association for Business Teacher Education, No. 6, 1979), pp. 53-56.

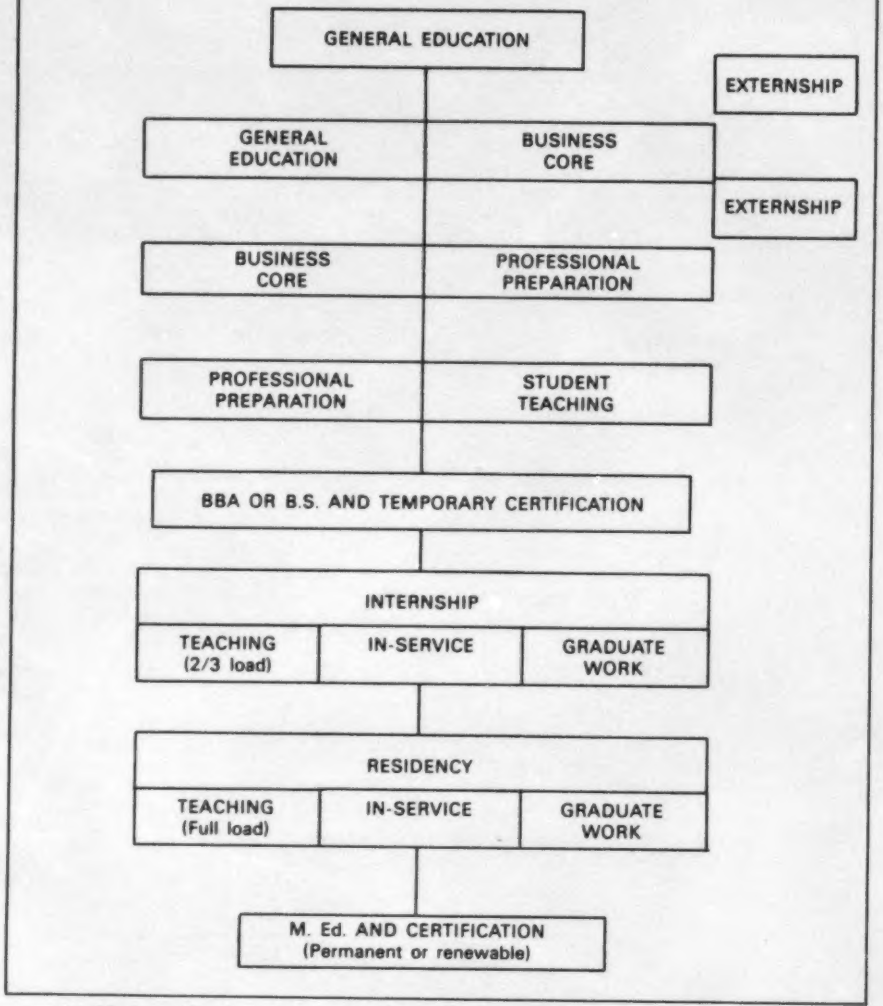
[11]*Ibid.*

Figure 4



Reprinted from 1974 NABTE CONVENTION REPORTS, *NABTE Review*, Reston, VA.

Figure 5



2. Observe/participate in the formulation of an IEP.
3. Observe several regular business teachers who are instructing handicapped students.
4. Participate in a one-to-one tutorial relationship with a handicapped student.
5. Observe regular and special education teachers at various levels of the school setting, i.e., elementary, middle or junior high, secondary, and postsecondary schools.

Watson, while writing of teachers of general business, listed ways in which consultants may be of service to teachers and their students. The list could also provide a base for modifying the current business teacher education programs. The suggestions for preparing students would include their ability to:

1. Recognize and become familiar with the characteristics of the handicapped or disadvantaged student — vision, hearing, emotional, learning, and social problems; low-reading level; short attention span.
2. Determine the special needs of the student — activities of short duration, a student reader, flexibility in activities, adapted assignments, preferential seating, special adaptive equipment.
3. Identify and select resource materials and equipment appropriate for meeting the special needs of the student — materials at various reading levels, cassettes or recordings, materials in braille or large print typewriters.
4. Adapt materials and activities to the special needs of the student — record activities on tapes or cassettes, prepare slides and other visuals, write notes or transcripts to supplement films, provide activities for varying ability levels.
5. Select a teaching-learning strategy that is appropriate for the special needs student — individualized instruction, small group activity, behavior modification techniques, adapted assignments.
6. Select or design evaluative measures appropriate for the special needs student — base evaluation on method of instruction used or on goals to be achieved. In addition, the grading scale may have to be adjusted to accommodate the special needs student.
7. Use community resources in order to become better informed. Such resources as parents' knowledge, physicians' input, various agencies' personnel expertise (for example, Crippled Children, the United Cerebral Palsy Association, the March of Dimes, the Department of Social Services, the Department of Mental Health, the Association for Retarded Children, and the Health Department) are helpful.
8. Adopt a positive and receptive attitude toward these students with special needs: Be open to suggestions; be creative. Work with the student to find better ways of accomplishing the established goals.[13]
9. Enroll in special teacher education classes to learn special methods for handling the exceptional student in the regular business education classroom. The following course description is taken from a current university schedule of evening classes:

> **Course 665**[14] Mainstreaming the exceptional student in the regular classroom.
>
> Rationale, educational programming and instructional procedures for educating exceptional students in the regular classroom; emphasis on the role of the regular class teacher.

[13]Gwendolyn S. Watson, *Special Needs Students in General Business*, Monograph 2 (New York: Harcourt Brace Jovanovich, Inc., 1980), pp. 2-3.

[14]Ohio State University, Schedule of Evening Classes, Autumn Quarter 1980, 1800 Cannon Drive, Columbus, OH 43210.

CHAPTER 6. CHALLENGES OF THE EIGHTIES

In retrospect, several major challenges have been identified. An awareness of these problems and concerted efforts toward their solution can help to alleviate them. One major challenge permeates the whole aspect of free appropriate education for all American students — that of attitudes toward handicapped individuals.

Societal Attitudes Toward Handicapped Persons

As mentioned in foregoing chapters, one major problem has been the tendency of society to regard the handicapped as different and, in many cases, to isolate them from day-to-day situations — in the home, community, and work environments. Bowe[1] reminded us that:

> Attitudes toward disabled people are complex and diverse, reflecting our own differences in background and perception, situational contrasts, social expectations, and variations among disabled people themselves. Yet one central, tragically wrong, assumption seems to pervade most of these attitudes: that disabled people are different from us more than they are like us and that their disabilities somehow set them apart from us.

The attitudes of the general public are of major concern to us — not only in business and other secondary school classrooms — because the students enrolled in many of the classes are there to acquire vocational competence. Consequently, the attitudes of those instrumental in creating employment opportunities for — as well as those who will be studying and working with — handicapped students are of vital importance.

Vocational Business Education

Business teachers usually subscribe to the philosophy that all students should acquire a marketable skill at high school level even if the student's long-range goal is for a profession or position requiring advanced study. Many handicapped students will recognize the inherent values in preparing for office jobs. However, others will be more concerned with obtaining only academic course work which will help them obtain baccalaureate (and higher) degrees. The student may or may not seem to be physically, emotionally, or mentally qualified for the fulfillment of the long-term goal. Therefore, counseling the student to acquire at least a basic marketable skill becomes essential. A dichotomous situation may develop because of the need for studying both vocational and college preparatory courses. As a consequence, the student may become very frustrated in trying to pursue two paths to graduation: one leading to the acquisition of an entry-level position and the other to admission into a post-secondary institution of higher learning.

In addition, individuals in government agencies for assisting the handicapped are, commendably, interested in furthering the employment of the handicapped in professions and upper level positions. As a consequence, some of these individuals stress only the academic aspects of secondary education and

[1]Frank Bowe, *Handicapping America* (New York: Harper & Row Publishers, 1978), pp. 108-09.

disparage the students' study of high school level skill subjects.

Emphasis on vocational business education is advocated by Miller.[2]

> The student who reaches the seventh or eighth grade and who is academically or behaviorally retarded is a prime candidate for an education based on academic and vocational preparation. To adequately serve educationally handicapped youth, the special educator, the vocational educator, and the school counsellor must adapt and adopt procedures and assessment instruments, that determine: (1) the student's needs and interests, (2) attitudes toward life preparation and work, (3) vocational and academic aptitudes, (4) social attitudes and values, (5) competencies to function in a job simulation station, and (6) competency to interface school-related information and skills to the requirements of work.

Thus, business teachers need to work with the handicapped students, their parents, special education personnel, and employers to convince them of the importance to the student of acquiring at least minimal skills for employment despite the long-term goals.

Both at the secondary school and postsecondary levels, business teachers and guidance personnel must be cognizant of the limitations in employment for their students. Opportunities are increasing especially because of the passage of legislation regarding employment of the handicapped. Less than a decade ago, however, one observer of visually handicapped machine transcribers learned that 9 of 50 transcription typists who were interviewed held baccalaureate degrees but were unable to obtain employment in their areas of specialization. Conservative government estimates show that less than 40 percent of 6.5 million handicapped students in the country are receiving an appropriate education.

Career Choices/Opportunities

One of the employers of many handicapped individuals over the last two decades has been the federal civil service departments. In some instances, the civil service ratings were reworded to accommodate handicapped persons. For example, a secretary who was paralyzed from the waist down was ultimately able to advance into a position which she had actually filled for many years — that of managing a soil conservation office. Although she had performed the managerial functions, it was not until she was able to operate a hand-controlled car and employ a subordinate to actually walk into the fields to acquire data that she was promoted.

In another case, a blind person was promoted within a state civil service network to a position of secretary after the wording of the job description was changed. The employer felt that it was more economical and more efficient to hire subordinates to perform routine duties which required sight and to use the mental capabilities of the sightless individual in those secretarial responsibilities calling for decision making, conducting appropriate public relations, etc.

Section 503 of the Rehabilitation Act of 1973 requires employers who hold contracts with the federal government for over $25,000 to agree not to discriminate in the employment, hiring, and promoting of handicapped individuals. Employers holding contracts or subcontracts for $50,000 or more must maintain affirmative action programs in relation to handicapped

[2]Sidney R. Miller, "Career Education: Lifelong Planning for the Handicapped," *Describing Learner Characteristics of Handicapped Children and Youth*, edited by David A. Sabatino and Ted L. Miller (New York: Harcourt, Brace and Jovanovich, 1979), p. 568.

individuals.

Uthe,[3] in a study of business and office jobs held in Kentucky by handicapped persons without college degrees, identified a variety of business positions filled by handicapped individuals. These positions and the handicapping conditions included the following:

accounting clerks (visual, orthopedic, muscular dystrophy, polio)
accountant (orthopedic)
billing clerk (polio)
bookkeeper II (visual)
check processing clerk I (polio)
classification clerk (hearing)
clerk — general (orthopedic)
clerk — mailroom (speech)
clerk-typist (orthopedic, epilepsy, diabetes)
medical transcriber (polio, visual)
PBX operator (orthopedic, heart condition)
payroll clerk, chief (visual)
secretary (disfigurement)
secretary — medical (polio)
clerk typist, head (speech)
clerk typist — medical, chief (speech, asthma)
compositor (hearing)
credit manager (hearing)
encoder (hearing)
file clerk I (dyslexia)
inventory clerk (heart condition)
keypunch operator (dyslexia, epilepsy)
secretary — personnel (orthopedic)
shipping clerk (heart condition)
switchboard operator (polio)
teller (visual)
teller, head (speech)

Descriptions of several handicapped persons' office jobs were given by Van Olinda.[4] These included blind secretaries — one of whom owned and operated a medical secretarial service business; an amputee serving as director for a nonprofit organization that specializes in placing handicapped in competitive industry; a secretary who lost the use of her legs because of polio; and a secretary trained after losing the use of her right hand and wrist to be a computer program operator and promoted from that position.

Hearing-impaired persons are employed in all principal occupations from professional to domestic. The largest proportion are nontransit operators, i.e., they run machines of various kinds. Craftsmen make up almost as large a group. Professional and technical jobs are next in frequency. There are fewer deaf lawyers, doctors, and dentists — though there are some of each — than would be expected from their numbers in the general population.[5]

In addition to employment in a large variety of occupations, the percentage of employed hearing handicapped persons is as high and in some instances higher than the general population.

Employment opportunities for the hearing handicapped continue to grow with expanded postsecondary training facilities. In 1970 there were less than eight postsecondary training programs in the United States. Presently, there are 55 postsecondary institutions providing comprehensive support services to enable the hearing handicapped students the opportunity to obtain the requisite education and training necessary for the future.[6]

All of those involved in the career education and guidance of handicapped students need to be cautious in order to avoid stereotyping. Many handicapped

[3]Elaine F. Uthe, "Business and Office Careers for the Physically Handicapped," *KBEA Journal* (Spring, 1980), p. 8.

[4]Pat Van Olinda, "Handicapped Workers — Overcoming the Obstacles to Success," *Today's Secretary* (November, 1976), pp. 18-20, 30.

[5]Jerome D. Schein and Marcus T. Delk, Jr., *The Deaf Population of the United States* (Silver Springs, MD: National Association of the Deaf, 1974), p. 81.

[6]B. Rawlings et al., *A Guide to College/Career Programs for Deaf Students* (Washington, D.C.: Gallaudet College, 1978).

individuals have been able to circumvent seemingly overwhelming obstacles in order to perform in positions previously thought to be barred to them.

Adequate Finances

Although the legislature of the past two decades, especially that of the Seventies, has granted the right of a free appropriate education to all children, the implementation of programs insuring this right are evolving slowly. Some of the reasons for this are lack of funds for employing special aides, for purchasing special classroom materials and equipment, for modifying physical plants, for providing adequate transportation, and for preparing the regular teaching staff through inservice training.

At the time of signing Senate Bill 6 (Public Law 94-142), President Ford[7] stated:

> I have approved S.6, the 'Education for All Handicapped Children Act of 1975.' Unfortunately, this bill promises more than the Federal Government can deliver and its good intentions could be thwarted by the many unwise provisions it contains. Everyone can agree with the objective stated in the title of this bill — educating all handicapped children in our nation. The key question is whether the bill will really accomplish that objective. . . . Despite my strong support for full educational opportunities for our handicapped children, the funding levels proposed in this bill will simply not be possible if Federal expenditures are to be brought under control and a balanced budget achieved over the next few years.
>
> . . . Fortunately, since the provisions of this bill will not become effective until fiscal year 1978, there is time to revise the legislation and come up with a program that is effective and realistic.

Inadequately Prepared Faculty

Within the present decade, the challenge of providing both regular and special education classrooms with teachers who possess the necessary knowledges and skills for helping students with special needs should no longer exist. Colleges and universities, school districts, and individuals are currently gearing programs of study to meet the needs of both new teachers and those presently employed.

At present, however, the regular classroom teacher and special educator are burdened with attempting to prescribe appropriate programs of study to handicapped students. Teachers may know little in regard to the best measures to adopt for teaching, counseling, and motivating. Need exists for more concrete examples of course modifications, for useful suggestions about employment opportunities, for an inexpensive means to provide special materials at varying reading levels, and for recognition of the fact that teachers will need reduced loads if the development of materials at several levels and in varying media are necessary because of the variety of handicapping conditions possessed by students in any given classroom.

As Kirk and Gallagher[8] stated, "The movement to provide special services for all exceptional children who need it from birth on still has many roads to travel before fulfillment, yet it remains one of the most significant trends of the last two decades."

[7]President Gerald R. Ford, Weekly Compilation of Presidential Documents, Volume 11, No. 49, Monday, December 8, 1975, p. 1335.

[8]Samuel A. Kirk and James J. Gallagher, *Educating Exceptional Children* (Boston: Houghton-Mifflin Company, 1979), p. 497.

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APPENDIX A
SPECIAL TEACHING MATERIALS
MAINSTREAMING

SOURCE NO. 1	Title:	Typing Keys for Remediation of Reading and Spelling
	Author:	Maetta Davis, 1977
	Content:	Instructional material specifically designed for the needs of vocational learning disabled students on the secondary level.
	Publisher:	Academic Therapy Publications P. O. Box 899 1539 Fourth Street San Rafael, CA 94901
SOURCE NO. 2	Title:	Effective Listening
	Author:	Evelyn Jenkins
	Content:	A six-lesson program to improve listening skills. Particularly valuable for the blind or partially sighted student.
	Publisher:	Western Tape Company 2761 Marine Way P. O. Box 69 Mountain View, CA 94042
SOURCE NO. 3	Title:	Managing Your Money
	Author:	Pat Herman
	Content:	Basic business materials for check writing, reconciling statements, and buying consumer goods and services.
	Publisher:	South-Western Publishing Company 5101 Madison Road Cincinnati, OH 45227
SOURCE NO. 4	Title:	Mainstreaming: With Special Emphasis on the Educable Mentally Retarded
	Content:	In-service training materials for mainstreaming.
	Publisher:	NEA Order Department Academic Building Saw Mill Road West Haven, CT 06516
SOURCE NO. 5	Title:	The Educable Mentally Retarded Student in the Secondary School
	Content:	In-service training with emphasis on secondary level
	Publisher:	NEA Order Department Academic Building Saw Mill Road West Haven, CT 06516

SOURCE NO. 6	Title:	Mainstreaming: What Teachers Say Series
	Content:	Four cassette tapes with printed overview and discussion questions.
	Publisher:	NEA Order Department Academic Building Saw Mill Road West Haven, CT 06516
SOURCE NO. 7	Title:	The Education for All Handicapped Children Act of 1975
	Content:	A multi-media package for in-service training, which includes three captioned film-strips, three audio cassettes, a copy of the law, question-answer document, and a script. Other laws and suggested resources are referenced.
	Publisher:	The Council for Exceptional Children Publication Sales 1920 Association Drive Reston, VA 22091
SOURCE NO. 8	Title:	Mainstreaming: Origins and Implications
	Content:	A critical examination of issues and concerns underlying the current nationwide movement toward mainstreaming.
	Publisher:	The Council for Exceptional Children Publication Sales 1920 Association Drive Reston, VA 22091
SOURCE NO. 9	Title:	Making It Work: Practical Ideas for Integrating Exceptional Children Into Regular Classes
	Content:	Contains ideas for setting up model mainstreaming programs at the high school level.
	Publisher:	The Council for Exceptional Children Publication Sales 1920 Association Drive Reston, VA 22091
SOURCE NO. 10	Title:	Hearing Impaired Children in the Mainstream
	Content:	Useful for regular classroom teachers since it describes basic principles and techniques for teaching hearing-handicapped students in regular classes.
	Publisher:	The Council for Exceptional Children Publication Sales 1920 Association Drive Reston, VA 22091
SOURCE NO. 11	Title:	Mainstreaming: A Practical Guide
	Authors:	James L. Paul, Ann Turnbull, William Cruickshank
	Content:	Provides practical assistance for planning and implementing in-service training for mainstreaming.
	Publisher:	Syracuse University Press Syracuse, NY 13210

SOURCE NO. 12	Title:	Medical Problems in the Classroom: An Educator's Guide
	Author:	Charles C. Thomas
	Content:	Assists in the management and educational needs of handicapped children.
	Publisher:	Charles C. Thomas 301-327 East Lawrence Avenue Springfield, IL 62717
SOURCE NO. 13	Title:	The Hearing Impaired Child in a Regular Classroom: Preschool, Elementary, and Secondary Years
	Content:	The section on secondary hearing-impaired students should be helpful to the business teacher.
	Publisher:	Alexander Graham Bell Association for the Deaf Special Services Department Washington, DC 20013
SOURCE NO. 14	Title:	Typing for the Physically Handicapped
	Author:	Jack Heller
	Publisher:	McGraw-Hill 1221 Avenue Of Americas New York, NY 10020
SOURCE NO. 15	Title:	A Handbook of Medical, Educational, and Psychological Information for Teachers of Physically Handicapped Children
	Content:	Excellent handbook for teachers of physically handicapped students which includes a section on vocational placement.
	Publisher:	Charles C. Thomas 301-327 East Lawrence Avenue Springfield, IL 62717
SOURCE NO. 16	Title:	Vocational Education for Handicapped Individuals in California
	Authors:	Diana Durham and Virginia Kennedy
	Publisher:	California Regional Resource Center 5210 Clinton St. Los Angeles, CA 90004
SOURCE NO. 17	Title:	P. L. 142 and Deaf Children
	Content:	Information on how the mainstreaming law relates to the education of deaf children.
	Publisher:	Gallaudet Alumni Newsletter Gallaudet College Washington, DC 20002
SOURCE NO. 18	Title:	Type with One Hand
	Author:	Nina Richardson
	Content:	Provides persons with the use of only one hand with a keyboard approach that will develop those skills and techniques necessary to type with both speed and accuracy. It may be used by persons with either the right or left hand.
	Publisher:	South-Western Publishing Company 5101 Madison Road Cincinnati, Ohio 45227

APPENDIX B
SOURCE MATERIALS FOR TEACHING THE BLIND AND HANDICAPPED STUDENT

SOURCE NO. 1	Closer Look:	Publication of the National Information Center for the Handicapped (Free) Contains helpful information, particularly regarding the handicapped. Closer Look Box 1492 Washington, DC 20013
SOURCE NO. 2	Bureau of Education for the Handicapped U. S. Office of Education 7th and D Street, S.W. Washington, DC 20202	
SOURCE NO. 3	The National Center for Law and the Handicapped 1235 North Eddy Street South Bend, IN 46617 (This organization publishes a newsletter, AMICUS, which deals exclusively with the handicapped.)	
SOURCE NO. 4	American Printing House for the Blind 1839 Frankfort Ave., Louisville, KY 40206	
SOURCE NO. 5	The President's Committee on Employment of the Handicapped Washington, DC 20210	
SOURCE NO. 6	The American Foundation for the Blind 15 West 16th St. New York, NY 10011	
SOURCE NO. 7	ALABAMA	Library for the Blind and Physically Handicapped 525 North Court Street Talladega, AL 35160
SOURCE NO. 8	ALASKA	Seattle Public Library Library for the Blind and Physically Handicapped 425 Harvard Avenue East Seattle, WA 98102
SOURCE NO. 9	ARIZONA	Arizona Regional Library for the Blind and Physically Handicapped 1016 North 32nd Street Phoenix, AZ 85008
SOURCE NO. 10	ARKANSAS	Arkansas Library Commission Library for the Blind and Handicapped 311 West Capitol Street Little Rock, AR 72201
SOURCE NO. 11	CALIFORNIA (Northern)	California State Library Books for the Blind and Physically Handicapped Library & Courts Building Ninth Street & Capitol Mall Sacramento, CA 95809

SOURCE NO. 12	CALIFORNIA (Southern)	Braille Institute Library 741 North Vermont Avenue Los Angeles, CA 90029
SOURCE NO. 13	COLORADO	Library for the Blind and Physically Handicapped Colorado State Library Annex 1332 Lincoln Street Denver, CO 80203
SOURCE NO. 14	CONNECTICUT	Library for the Blind and Physically Handicapped 90 Washington Street Hartford, CT 06106
SOURCE NO. 15	DELAWARE	Division of Libraries Handicapped Services 215 Dover Street Dover, DE 19901
SOURCE NO. 16	DISTRICT OF COLUMBIA	National Collections for the Blind and Physically Handicapped Library of Congress Washington, DC 20542
SOURCE NO. 17	FLORIDA	Talking Book Library Bureau of Blind Services Post Office Box 2299 Daytona Beach, FL 32015
SOURCE NO. 18	GEORGIA	Library for the Blind and Physically Handicapped State Dept. of Education 1050 Murphy Avenue, S. W. Atlanta, GA 30310
SOURCE NO. 19	GUAM	State Library for the Blind and Physically Handicapped 402 Kapahulu Ave. Honolulu, HI 96815
SOURCE NO. 20	HAWAII	State Library for the Blind and Physically Handicapped 402 Kapahulu Ave. Honolulu, HI 96815
SOURCE NO. 21	IDAHO	Utah State Library Commission Division for the Blind and Physically Handicapped 2150 South Second West, Suite 16 Salt Lake City, Utah 84115
SOURCE NO. 22	ILLINOIS	Chicago Public Library Dept. for the Blind and Physically Handicapped Hild Branch, 4544 Lincoln Ave. Chicago, IL 60625
SOURCE NO. 23	INDIANA	Division for the Blind and Physically Handicapped Indiana State Library 140 North Senate Ave. Indianapolis, IN 46204

SOURCE NO. 24	IOWA	Iowa Commission for the Blind Fourth & Keosauqua Streets Des Moines, IA 50309
SOURCE NO. 25	KANSAS	Kansas State Library Blind and Physically Handicapped Division 801 Harrison St., Room 5 Topeka, KS 66612
SOURCE NO. 26	KENTUCKY	Kentucky Regional Library for the Blind and Physically Handicapped P. O. Box 818 Frankfort, KY 40601
SOURCE NO. 27	LOUISIANA	Louisiana State Library Dept. for the Blind and Physically Handicapped Box 131 Baton Rouge, LA 70821
SOURCE NO. 28	MAINE	Perkins Regional Library for the Blind and Physically Handicapped Perkins School for the Blind 175 North Beacon St. Watertown, MA 02172
SOURCE NO. 29	MARYLAND	Maryland State Library for the Physically Handicapped 1715 North Charles St. Baltimore, MD 21201
SOURCE NO. 30	MASSACHUSETTS	Perkins Regional Library for the Blind and Physically Handicapped Perkins School for the Blind 175 North Beacon St. Watertown, MA 02172
SOURCE NO. 31	MICHICAN (except Wayne County)	Blind and Physically Handicapped Library Michigan Department of Education Bureau of Library Services 735 East Michigan Ave. Lansing, MI 48913
SOURCE NO. 32	MICHIGAN (Wayne County only)	Wayne County Federated Library System Department for the Blind and Physically Handicapped 33030 Van Born Road Wayne, MI 48184
SOURCE NO. 33	MINNESOTA	Library for the Blind and Physically Handicapped Minnesota Braille and Sight Saving School Faribault, MN 55021
SOURCE NO. 34	MISSISSIPPI	Mississippi Library Commission Library for the Blind and Physically Handicapped Mart 51, Terry Road Jackson, MS 39204

SOURCE NO. 35	MISSOURI	Wolfner Memorial Library for the Blind and Physically Handicapped 1808 Washington Ave. St. Louis, MO 63103
SOURCE NO. 36	MONTANA	Montana State Library Division for the Blind and Physically Handicapped 930 East Lyndale Ave. Helena, MT 59601
SOURCE NO. 37	NEBRASKA	Library for the Blind and Physically Handicapped Nebraska Public Library Commission State Capitol Lincoln, NE 68509
SOURCE NO. 38	NEVADA	Regional Library for the Physically Handicapped 2351 Arrowhead Dr. Carson City, NV 89701
SOURCE NO. 39	NEW HAMPSHIRE	Library Services to the Handicapped Division New Hampshire State Library 12 Hills Ave. Concord, NH 03301
SOURCE NO. 40	NEW JERSEY	New Jersey Library for the Blind and Handicapped 1700 Calhoun St. Trenton, NJ 08638
SOURCE NO. 41	NEW MEXICO	Books for the Blind and Physically Handicapped Division New Mexico State Library Box 1629 Santa Fe, NM 87501
SOURCE NO. 42	NEW YORK (New York City and Long Island)	Library for the Blind and Physically Handicapped The New York Public Library 166 Avenue of the Americas New York, NY 10013
SOURCE NO. 43	NEW YORK (except New York City and Long Island)	New York State Library for the Blind 226 Elm St. Albany, NY 12202
SOURCE NO. 44	NORTH CAROLINA	North Carolina-South Carolina Regional Library for the Blind 1314 Dale St. Raleigh, NC 27605
SOURCE NO. 45	NORTH DAKOTA	Library for the Blind and Physically Handicapped Minnesota Braille and Sight Saving School Faribault, MN 55021

SOURCE NO. 46	OHIO (Southern)	Library for the Blind 444 West Third St. Cincinnati, OH 45202
SOURCE NO. 47	OHIO (Northern)	Braille and Talking Book Service Cleveland Public Library 325 Superior Ave. Cleveland, OH 44114
SOURCE NO. 48	OKLAHOMA	Oklahoma Library for the Blind and Physically Handicapped 1108 N. E. 36th St. Oklahoma City, OK 73111
SOURCE NO. 49	OREGON	Oregon State Library Division for the Blind and Physically Handicapped 432 Church St., S. E. Salem, OR 97301
SOURCE NO. 50	PENNSYLVANIA (Eastern)	Free Library of Philadelphia Library for the Blind and Physically Handicapped 1700 Spring Garden St. Philadelphia, PA 19130
SOURCE NO. 51	PENNSYLVANIA (Western)	Carnegie Library of Pittsburgh Regional Library for the Blind and Physically Handicapped 4724 Baum Blvd. Pittsburgh, PA 15213
SOURCE NO. 52	PUERTO RICO	National Collections for the Blind and Physically Handicapped Library of Congress Washington, DC 20542
SOURCE NO. 53	RHODE ISLAND	Regional Library for the Blind and Physically Handicapped Rhode Island Department of State Library Services 95 Davis St. Providence, RI 02908
SOURCE NO. 54	SOUTH CAROLINA	North Carolina - South Carolina Regional Library for the Blind 1314 Dale Street Raleigh, NC 27605
SOURCE NO. 55	SOUTH DAKOTA	South Dakota Library for the Blind and Physically Handicapped 701 East Sioux Ave. Pierre, SD 57501
SOURCE NO. 56	TENNESSEE	Tennessee Library for the Blind and Physically Handicapped 5200 Centennial Blvd. Nashville, TN 37209
SOURCE NO. 57	TEXAS	Division for the Blind and Physically Handicapped Texas State Library P. O. Box 12927, Capitol Station Austin, TX 78711

SOURCE NO. 58	UTAH	Utah State Library Commission Division for the Blind and Physically Handicapped 2150 South Second West, Suite 16 Salt Lake City, Utah 84115
SOURCE NO. 59	VERMONT	New York State Library for the Blind 226 Elm St. Albany, NY 12202 (Physically handicapped residents of Vermont apply to Division for the Blind and Physically Handicapped, Library of Congress, Washington, DC 20542)
SOURCE NO. 60	VIRGIN ISLANDS	Virgin Islands Regional Library for the Blind and Physically Handicapped St. Thomas Public Library P. O. Box 390 St. Thomas, VI 00801
SOURCE NO. 61	VIRGINIA	Virginia State Library for the Blind and Physically Handicapped 3003 Parkwood Ave. Richmond, VA 23221
SOURCE NO. 62	WASHINGTON	Seattle Public Library Library for the Blind and Physically Handicapped 425 Harvard Avenue East Seattle, WA 98102
SOURCE NO. 63	WEST VIRGINIA	Carnegie Library of Pittsburgh Regional Library for the Blind and Physically Handicapped 4724 Baum Boulevard Pittsburgh, PA 15213
SOURCE NO. 64	WISCONSIN	Library for the Blind and Physically Handicapped Milwaukee Public Library 814 West Wisconsin Milwaukee, WI 53233
SOURCE NO. 65	WYOMING	Utah State Library Commission Division for the Blind and Physically Handicapped 2150 South Second West, Suite 16 Salt Lake City, UT 84115
SOURCE NO. 66	State of Illinois Board of Vocational Education and Rehabilitation Division of Vocational and Technical Education 1035 Outer Park Drive Springfield, IL 82708 (Particularly helpful is Bulletin #40-213, Occupational Education for Disadvantaged and Handicapped Persons)	
SOURCE NO. 67	Eric Document Reproduction Service P. O. Box 190 Arlington, VA 22210	
SOURCE NO. 68	State Departments of Education Vocational Education Supervisor Business and Office Education (Various States)	

APPENDIX C
COMPETENCY PROFILE FOR VOCATIONAL TEACHERS INSTRUCTING SENSORY AND PHYSICALLY IMPAIRED STUDENTS*

A. Develop a positive attitude toward working with sensory and physically impaired in the regular program.

1. Assess own attitude toward working with handicapped individuals.
2. Participate in activities simulating handicapping conditions.
3. Identify myths, misconceptions, and stereotypes.
4. Identify handicapping characteristics of students.
5. Identify economic indicators supporting hiring of the handicapped.
6. Consult with persons working successfully with handicapped to determine why they are committed.
7. Observe handicapped in successful roles (e.g., on the job).
8. Interact with handicapped individuals.
9. Review legislation concerning handicapped.
10. Persist in the fact of seeming failure.

B. Implement modifications in the physical setting.

11. Identify architectural barriers.
12. Recommend needed changes in facility design.
13. Determine the special safety conditions that may be required by the handicapped students.
14. Modify work stations as needed.
15. Secure/adapt appropriate equipment as needed by students.

C. Modify curriculum and instruction.

16. Identify and verify vocational skills needed by each student to meet career goals.
17. Identify and verify related skills (reading, math).
18. Identify jobs on career hierarchy/ladder.
19. Match/modify jobs on career hierarchy/ladder to students' ability.
20. Determine if texts/materials are appropriate to students' reading levels.
21. Adapt materials to individual learning styles.
22. Develop materials to meet individual learning styles.
23. Teach job-seeking skills.
24. Teach job-survival skills.
25. Modify length of training period to meet students' needs.
26. Promote use of open-entry/open-exit programming.
27. Use a competency-based grading system or supplement 'grade' with competency profile.
28. Employ alternative teaching practices (e.g., peer tutoring, small-group discussions.
29. Individualize teaching practices.
30. Use specialized language instruction techniques (e.g., to teach vocabulary.)
31. Use a multisensory approach to instruction.
32. Adapt/use media for individual needs (e.g., captions).
33. Simplify instruction of essential tasks.
34. Identify instructional resources, materials, and techniques available to the teacher.

35. Use supportive instructional services.
36. Provide frequent reinforcement and success experiences.
37. Review effectiveness of curriculum and instruction regularly and update as required.
38. Modify instructional evaluation techniques as needed.

D. Participate in ongoing evaluation concerning sensory and physically impaired.

39. Develop skills in recognizing students with handicaps.
40. Review any existing student records.
41. Devise informal measures for assessing students' abilities.
42. Refer students for testing as needed.
43. Identify student learning styles.
44. Assess students' motor skills in relation to occupational skills required.
45. Determine if the disability is, in fact, a vocational handicap.
46. Participate in development of individualized student plans (e.g., IEPs).
47. Involve students/parents on an ongoing basis.
48. Monitor and update student goals based on student progress.
49. Provide student with realistic picture of job skills needed and time required to reach career goal.

E. Develop effective communications.

50. Establish rapport with students.
51. Facilitate the productive integration of the disabled with their peers.
52. Assist students in developing realistic goal-setting skills.
53. Involve students in developing their own individual programs.
54. Provide assertiveness training for students.
55. Teach appropriate situational responses/discrimination skills.
56. Secure feedback from individual students on how well the program is meeting their needs.
57. Use student contracts (performance contracting, behavior contracting).
58. Relate self-awareness activities to career goals.
59. Develop functional means (e.g., sign language) to communicate with students having communication deficits.
60. Observe nonverbal behaviors as indicators of feelings.
61. Ensure that your communication patterns (verbal, nonverbal) do not single out handicapped students as different.
62. Use active listening techniques.
63. Work cooperatively with other support/resource persons (e.g., interpreter, itinerant teachers) in the classroom.
64. Maintain liaison with special education personnel as needed or required.
65. Communicate with guardians, employers, agencies, and all others affecting handicapped student.
66. Facilitate the placement of handicapped students by working with employer.
67. Encourage administrators to support creative/alternative instructional approaches.

F. Identify and utilize supportive services (on campus and in the community).

68. Identify needs students have.
69. Obtain or develop a directory of support services.
70. Participate in activities designed to increase your knowledge of what services do and how to use them.
71. Inform students of relevant services available to them.
72. Match students' needs with available services.
73. Identify appropriate contact persons for teachers.
74. Initiate referral process as appropriate (inform service, refer student).

G. Provide aid in emergencies.

75. Be alert to the types of emergencies that might occur for individual students.
76. Identify legal implications involved in giving aid.
77. Identify emergency procedures to be followed.
78. Obtain training in types of aid for individual students.
79. Identify/contact emergency resources.

H. Continue professional growth.

80. Work toward improving the climate for acceptance: in yourself, in colleagues, in employers.
81. Review related literature.
82. Participate in orientations and workshops.
83. Observe/interact with colleagues who are doing a model job in teaching handicapped students.
84. Participate in experiences that promote creative development and exchange (e.g., problem sharing with colleagues).
85. Participate in/support professional groups dealing with handicapped.
86. Include in your own professional development plans, steps to acquire additional skills for teaching the handicapped.

* Prepared by the DACUM Panel, National Center for Research in Vocational Education, The Ohio State University, Columbus, Ohio, May, 1979.

APPENDIX D

INDIVIDUALIZED EDUCATION PROGRAM (IEP)

SCHOOL DISTRICT OF RESIDENCE Jackson School District

Student's Name: Tom Turbo

Birthdate: 2/14/61

Participants in IEP Development & Writing:

Name	Title
Mr. Turbo	Parent
Mr. Jones	LEA Representative
Mr. Lavelle	Vocational Technical Consultant
Ms. Smith	Teacher

Current Assignment: 11th Grade

Date Written: 3/6/81

Date of Annual Review: 3/6/82

Operating Agent: Jackson School District

Person responsible for Implementation of Program: Mr. Jones

Date of IEP Planning Meeting: 3/1/81

Primary Assignment and Statement of Integration	Date of Initiation	Expected Duration Of Services
Regular class and Vocational Technical school program 11th grade with Learning Disabilities. Resource room instruction in reading and math.	3/81	ongoing

Related Services:	Date of Initiation	Expected Duration of Services
Bus Transportation	3/81	ongoing
Physical Education	3/81	ongoing

SPECIAL MEDIA OR MATERIALS:

Copies to:
- Teacher (Original)
- Parent
- Operating Agent
- District of Residence

(AID:mlm - Form 13A - Rev. 11/30/77)

Loretta A. McKinney and Donna M. Seay, *Development of Individualized Education Programs (IEPs) for the Handicapped in Vocational Education*. Information Series No. 144. National Center for Research in Vocational Education, The Ohio State University, Columbus, Ohio, 1979.

STUDENT NAME Tom Turbo

DATE IEP WRITTEN 3/6/81

PRESENT EDUCATION LEVELS

Describe the student's present educational levels (educational strengths/weaknesses) in appropriate curricular areas. These may include, but are not limited to, academic achievement; vocational skills; self-help skills; social adaptation; emotional maturity; motor skills; hearing functioning; visual functioning (orientation and mobility); and speech/language skills. When appropriate, indicate the name of the test/instrument used, and the date of testing.

As reflected on an Informal Reading Inventory, Tom is reading at an independent level of 6th grade, an instructional level of 6th grade, and a frustration level of 7th grade. Results show Tom's word attack skills to be strong, he has a strong foundation of all consonants, consonant blends, vowels and vowel diagraphs. Tom also shows strength in locating the facts. His weak areas in comprehension are getting the main idea, drawing conclusions, and following directions.

Results on the Key Math show Tom working on a 4th grade math level. He has a firm foundation of basic facts in addition, subtraction, and multiplication. Weak areas include division, measurement, fraction, money, word problems, and decimals.

Results on the Prognostic Test of Mechanical Abilities show Tom's strengths in addition, subtraction, and multiplication. He also could identify whole inch measurement and tools. Weaknesses were shown in identifying the tools function, numerous problems were also shown in spatial relationships.

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